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California State University Los Angeles

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General Catalog

UNIVERSITY OF ILLINOIS
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The University catalog is issued by the Office of the Dean of Academic Planning, with editorial assistance from the Office of Public Affairs. Information about academic programs in this issue is revised to January 1, 1976.

Copies of the catalog may be purchased in person or ordered by mail from the Trident Shop (book store). The price, established under regulations of the Board of Trustees of The California State University and Colleges, is stated on the cover. On copies ordered by mail from the Trident Shop, 50 cents must be added to the check or money order to cover the cost of handling and mailing.

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The Chancellor reserves the right to add to, amend, or repeal any of his executive orders, at such time as he may choose, and the President of California State University, Los Angeles, reserves the right to add to, amend, or repeal provisions of this publication and rules of the University, including handbooks, at such time as he may choose. No executive order shall be construed, operate as, or have the effect of an abridgement or limitation of any rights, powers, or privileges of the Chancellor nor shall any catalog provision or rule of the University be construed, operate as, or have the effect of an abridgement or limitation of any rights, powers, or privileges of the President.

Every effort has been made to assure the accuracy of the information in this catalog. Students are advised, however, that such information is subject to change without notice. Therefore, they should consult the appropriate instructional departments, schools, or administrative offices for current information.

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1976—1977 CATALOG



California State University Los Angeles

5151 State University Drive, Los Angeles, California 90032

THE CALIFORNIA STATE UNIVERSITY AND COLLEGES

Academic Calendar

SUMMER QUARTER 1976

June 21 (Monday)
July 5 (Monday)
August 30–September 4
September 6–25

Instruction Begins
Holiday
Examinations
Recess

FALL QUARTER 1976

September 27–30
October 4 (Monday)
October 16 (Saturday)
October 30 (Saturday)
November 11 (Thursday)
November 25–27
December 11 (Saturday)
December 13–18
December 20–January 1

Advisement and Late Registration
Instruction Begins
Graduate Record Examination
Graduate Management Admissions Test
Holiday
Holidays
Graduate Record Examination
Examinations
Recess

WINTER QUARTER 1977

January 3 (Monday)
January 8 (Saturday)
January 29 (Saturday)
February 21 (Monday)
February 26 (Saturday)
March 14–19
March 21–26

Instruction Begins
Graduate Record Examination
Graduate Management Admissions Test
Holiday
Graduate Record Examination
Examinations
Recess

SPRING QUARTER 1977

March 26 (Saturday)
March 28 (Monday)
April 23 (Saturday)
May 30 (Monday)
June 6–11
June 11 (Saturday)
June 13–18

Graduate Management Admissions Test
Instruction Begins
Graduate Record Examination
Holiday
Examinations
Graduate Record Examination
Recess

SUMMER QUARTER 1977

June 20 (Monday)
July 4 (Monday)
July 9 (Saturday)
August 29–September 3
September 5–24

Instruction Begins
Holiday
Graduate Management Admissions Test
Examinations
Recess

FALL QUARTER 1977

September 26–29
October 3 (Monday)
November 11 (Friday)
November 24–26
December 12–17
December 19–January 2

Advisement and Late Registration
Instruction Begins
Holiday
Holidays
Examinations
Recess

A more detailed calendar of academic dates and deadlines is published each quarter in the "Schedule of Classes".

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The California State University and Colleges

The individual California State Colleges were brought together as a system by the Donahoe Higher Education Act of 1960. In 1972 the system became The California State University and Colleges, and fourteen of the nineteen campuses received the title *University*.

The oldest campus, San Jose State University, was founded in 1857 and became the first institution of public higher education in California. The newest campus, California State College, Bakersfield, began instruction in 1970.

Responsibility for The California State University and Colleges is vested in the Board of Trustees, whose members are appointed by the Governor. The Trustees appoint the Chancellor, who is the chief executive officer of the system, and the Presidents, who are the chief executive officers on the respective campuses.

The Trustees, the Chancellor, and the Presidents develop systemwide policy, with actual implementation at the campus level taking place through broadly based consultative procedures. The Academic Senate of The California State University and Colleges, made up of elected representatives of the faculty from each campus, recommends academic policy to the Board of Trustees through the Chancellor.

Academic excellence has been achieved by The California State University and Colleges through a distinguished faculty, whose primary responsibility is superior teaching. While each campus in the system has its own unique geographic and curricular character, all campuses, as multipurpose institutions, offer undergraduate and graduate instruction for professional and occupational goals as well as broad liberal education. All of the campuses require for graduation a basic program of general education for breadth, irrespective of the type of bachelor's degree or major field selected by the student. A limited number of doctoral degrees is offered jointly with the University of California.

Presently, under the system's "New Approach to Higher Education," the campuses are undertaking innovative programs to meet the changing needs of students and society. Among pilot programs under way are instructional television projects, self-paced learning plans, mini-courses, and credit-by-examination alternatives. The Consortium of The California State University and Colleges fosters and sponsors local, regional, and statewide external degree and certificate programs to meet the needs of individuals who find it difficult or impossible to attend classes on a campus.

Enrollments in fall 1975 totaled approximately 297,000 students, who were taught by a faculty of 16,000. Last year the system awarded over 57 percent of the bachelor's degrees and 36 percent of the master's degrees granted in California. Over 525,000 persons have been graduated from the nineteen campuses since 1960.

Directory Information

See the "Directory of Information" section beginning on page 409 for the listings of members and officers of the Board of Trustees, the staff of the Office of the Chancellor, and the names, locations, and presidents of the 19 campuses of The California State University and Colleges system.



The University

California State University, Los Angeles, founded in 1947 by action of the California State Legislature, has become a comprehensive university offering programs of higher education in more than 50 academic and professional fields. The University's reputation as a center of learning attracts students from all areas of the United States and from many foreign countries. Nearly one-third of the students are engaged in post-baccalaureate study leading to master's degrees, teaching credentials, or other programs of professional advancement.

Originally known as Los Angeles State College, the University was accorded its present status and name in 1972 by the Board of Trustees of The California State University and Colleges, in recognition of the breadth of its academic offerings, the national accreditation of its professional degree programs, and the high percentage of its faculty holding earned doctoral degrees.

The University is located at the eastern boundary of the City of Los Angeles, five miles from the Civic Center and readily accessible by major freeways to metropolitan Los Angeles and suburban areas beyond. The 160-acre hilltop site, occupied as the permanent campus of the University since 1956 was once part of a Spanish land grant known as the Rancho Rosa Castilla. One of California's historic adobes was erected on this site in 1776 by Franciscan missionaries, and destroyed by fire in 1908.

Goals of the University

The philosophic goals of the University are to develop and support those academic programs and structures which serve to transmit traditional cultures and to advance human knowledge. Programs consonant with these goals provide the highest possibilities for understanding of ourselves and of our physical, biological and social environment; for improvement of the quality of life for all humanity; and for development of persons who as members of society will contribute to the achievement and sustenance of a harmonious existence of human beings with one another and with their environment.

As an urban institution, California State University, Los Angeles, emphasizes those programs, organizations and research activities which promote integration of knowledge and process from all fields for solution of human problems. The University seeks to prepare its graduates to deal effectively with problems indigenous to the urban environment, remaining aware that the urban setting is but one segment of the regional, national, and global complexes with which these problems are shared.

The purposes of the University are embodied in obligations to provide rigorous professional preparation, to interpret for the present the best that has been expressed, created or discovered in earlier ages, to add new knowledge, to foster societal betterment, and to extend as far as possible the mind and spirit of all who participate in University life.

The University's goals are implemented through its charter, which charges the University with responsibility for providing programs of instruction "for undergraduate students and graduate students through the master's degree in the liberal arts and sciences, the applied fields and the professions."

The Faculty

The reputation which Cal State L.A. enjoys as an institution of higher learning is creditable in large measure to the quality of the faculty and to their commitment to teaching and scholarship. These men and women have earned their highest degrees from leading universities throughout the world. Their achievements in their academic fields of specialization make them eminently qualified to teach students possessing a variety of academic interests.

The faculty's high regard for scholarship is evinced by its continuing participation in scholarly study and research and creative efforts in the arts, letters and sciences. Proof of commitment to teaching is found in the fact that senior members of the University's faculty regularly teach introductory courses in their disciplines, and assume responsibility for academic and career advisement of students majoring in their departmental programs. Close ties between students and faculty members develop further through campus organizations and in University committees, on which students serve as voting members.

Accreditation

The University is accredited by the Western Association of Schools and Colleges, the agency responsible for granting national accreditation to colleges and universities in the western United States. For the State of California, the University is accredited by the State Board of Education. Professional degree programs offered and the national societies and associations accrediting these programs are as follows:

ART (graduate and undergraduate): National Association of Schools of Art

BUSINESS ADMINISTRATION (graduate and undergraduate): American Assembly of Collegiate Schools of Business

CHEMISTRY: American Chemical Society

DIETETICS (Coordinated Undergraduate Program): American Dietetics Association

EDUCATION: National Council for Accreditation of Teacher Education

ENGINEERING: Engineers' Council for Professional Development

HOME ECONOMICS: American Home Economics Association

MUSIC: National Association of Schools of Music

NURSING: National League for Nursing (graduate and undergraduate), and California State Board of Nursing Education and Nurse Registration (undergraduate).

The University also holds membership in a number of national and regional organizations concerned with advancement of higher education. They include the American Council on Education, the American Association of State Colleges and Universities, the Association of American Colleges, Council of Graduate Schools, National Collegiate Honors Council, Western Association of Graduate Schools, and the Western Association of Schools and Colleges. Also, women graduates are qualified for membership in the American Association of University Women.

The Facilities

The academic character of the University is reflected in the contemporary design of its physical facilities. Multistoried structures are surrounded by landscaped malls and plazas. All academic facilities are air-conditioned. Multilevel parking garages are incorporated into the design of the newest buildings.

The Quarter System

The University operates year-round on the quarter system. Four quarters, each of 11 weeks duration, comprise the academic year calendar. The Summer quarter is a regular academic quarter, equal in all respects to the other three quarters. Normal academic progress may be maintained by full-time attendance during any three quarters of each year.

Instructionally Related Services

The University maintains extensive programs of instructionally related services for students. These include the John F. Kennedy Memorial Library and the Audiovisual Service Center, described in the following paragraphs. Other student services provided by the offices of the Dean of Students are described in the section on "Student Services and Activities."

The John F. Kennedy Memorial Library

The John F. Kennedy Memorial Library with a current collection of almost 700,000 books and bound periodicals, is being expanded at the rate of approximately 31,000 volumes a year toward eventual holdings of more than 800,000 volumes.

The Library receives regularly more than 5,800 periodicals, scholarly journals and newspapers. Bound backfiles of periodicals now total more than 96,000 volumes. Also available is an extensive collection of microfilmed journals, books and documents.

The Library is an official depository for United States government and California State publications. Files of important United Nations papers and other documents are maintained. Among the Library's special collections are the Perry Long Memorial Collection on Printing and Engraving, which contains more than 2,000 items, and the Roy Harris Archive, consisting of the noted American composer's personal collection of his scores, manuscripts, recordings, correspondence and memorabilia.

The Library, located at the center of the Cal State L.A. campus, occupies two interconnected structures, designated Library North and Library South.

Direct access is provided to all library materials. Books, reference materials and periodicals are organized under a departmental plan separating science and technology, social science and humanities. The Curriculum Center provides materials in support of the teacher training program. The Audio Center makes recordings available. The Limited Loan Room maintains and charges collections of books designated as required course readings. Interlibrary loan services are provided for both students and faculty.

An information service located on the first floor of Library North assists library patrons with directional and informational questions, reference inquiries, and card catalog assistance.

Access to the information resources and services of all California State University and Colleges libraries in Southern California is made possible through the Mutual Library Use Agreement. Students, faculty and staff may use their photo-identification cards as library cards at these libraries. Special services available for students and faculty include photo-duplicating, typing rooms, and group study rooms.

Library Orientation. The Library staff aids students in improving their library utilization skills. A self-guided tour through the public service area and divisions of the Library is provided, and conducted tours may be requested.

Audiovisual Service Center

The Audiovisual Service Center in King Hall provides equipment and materials in support of the instructional program of the University, serving all day, evening, and extension classes. When desired instructional materials are not available commercially, the Center produces such materials as charts, graphs, overhead transparencies, slides, filmstrips, photographs, and audio and video tapes.

For approved projects, the Center will also develop and produce complete instructional programs which may consist of sound-filmstrips, slide-tape package, or other appropriate combination of media and materials.

An experimental classroom equipped with an automated student response system is available to all academic departments for innovative instructional activities.

Continuing Education and Innovative Programs

The Office of Continuing Education and Innovative Programs administers the Extension Service, Summer Session, Community Services, Urban Affairs, External Degrees and Innovative Programs.

Extension Service. The Extension Service provides university-level courses at various locations for the professional, vocational, and cultural improvement of persons who do not

wish to take college work in residence. Extension courses may be taken without matriculating at Cal State L.A., provided course prerequisites are met. Offerings are equivalent in level and quality to on-campus courses, and many courses may be applied, within specified limits, toward satisfying degree and credential requirements. Classes taken in extension are not counted toward the residence requirement for graduation.

Extension courses may be offered in response to specific requests of groups or organizations, or by the Extension Service without such sponsorship. Extension terms are flexible but generally parallel the quarter calendar. Information about extension courses and programs is available from the Director of Extension Services.

Summer Sessions. Programs include special institutes, workshops, and seminars designed to meet the needs of professional people in education and other fields. Intensive scheduling, requiring attendance for only part of the summer, is emphasized.

Students who are high school graduates or over 18 years of age may enroll in Summer Session without the process of admission to the University. However, work taken in Summer Session may be counted toward residence requirements by those who subsequently matriculate at Cal State L.A. Established application procedures for admission must be followed by those who wish to continue study during regular sessions.

Community Services. To meet its mandated responsibility to work closely with community, business, and professional organizations in satisfying the educational needs of the metropolitan area it serves, the University operates a continuing program of special non-credit institutes, conferences and courses. These special programs are offered in response to specific requests by such organizations as chambers of commerce, business and professional associations, or large industrial firms; or they may be offered by Cal State L.A. on its own initiative when a significant need is determined to exist.

Only university-level work is offered, and urgency and appropriateness are determining factors in decisions to offer these non-credit programs. Information concerning this education service is available from the office of the Director of Community Services.

External Degrees. As a participating campus in the Consortium of The California State University and Colleges, Cal State L.A. offers through the Consortium, programs leading to both bachelor's and master's degrees. These programs are designed to extend degree-oriented educational opportunities to persons who are unable to spend time in residence on a campus in existent educational programs. External degree programs are conducted in non-traditional timeframes, generally at off-campus locations.

In addition to the Consortium programs, some Cal State L.A. degree programs are offered through the external mode. Information concerning these programs is available from the Dean of Continuing Education and Innovative Programs.

International Programs

An overseas study program is offered by The California State University and Colleges International Programs in which students enroll for a full academic year simultaneously at their home campuses, where they earn academic credit and maintain campus residency, and at a distinguished foreign university or a special program center.

Cooperating universities abroad include the University of Provence, France; the Universities of Heidelberg and Tübingen, Germany; the University of Florence, Italy; the Universidad Ibero-Americana, Mexico; the Universities of Granada and Madrid, Spain; the University of Uppsala, Sweden; Lincoln College and Massey University, New Zealand; and Waseda University, Japan. In the United Kingdom, cooperating universities, which may vary from year to year, include Aberdeen, Dundee, Bangor, Heriot-Watt, Leicester, London, Oxford, Liverpool, Lampeter, and Sheffield. In addition, California State University and Colleges students may attend a special program in Taiwan, Republic of China, or an architectural program in Copenhagen, Denmark.

Eligibility is limited to students who will have upper division or graduate standing during

their year of participation, who have a 2.5 overall grade point average (3.0 for the United Kingdom program), who show ability to adapt to a new environment, and who, in the cases of France, Germany, Mexico, and Spain, have completed two years of college level study (or the equivalent) in the language of instruction at the foreign university. Selection is made by a faculty committee on the student's home campus and by a statewide faculty committee.

The International Programs is supported by state funds to the extent that such funds would have been expended had the student concerned continued to study in California. Students assume costs for pre-departure orientation, insurance, transportation, housing, and meals. Home campus registration fees, tuition on the home campus for out-of-state students (if the student is not a California resident), and personal incidental expenses or vacation travel costs while abroad are also paid by the student. The Office of International Programs collects and administers funds for those items which the program must arrange or can negotiate more effectively, such as home campus fees, orientation costs, insurance, out-bound transportation, and, in some centers, housing. Students accepted in the International Programs may apply for any financial aid available at their home campuses, except work-study and college opportunity grants.

Application for the 1977-78 academic year must be submitted before February 11, 1977 (except for New Zealand and United Kingdom applicants who must submit applications by May 14, 1976, and January 7, 1977, respectively). Applicants are notified of acceptance by April 1, 1977 (New Zealand by June 3, 1977). Detailed information may be obtained from Dr. John L. Houk, Dean of Academic Planning, Administration 725, or by writing to The California State University and Colleges International Programs, 400 Golden Shore Drive, Long Beach, California 90802.

Air Force ROTC

Through arrangements with the University of Southern California, both the two- and four-year Air Force ROTC programs and two-, three-, and four-year scholarships are available to qualified men and women attending Cal State L.A. Both aptitude and physical examinations are required.

Scholarships cover costs of enrollment, books, and a monthly subsistence allowance. The subsistence allowance is paid also to nonscholarship cadets enrolled in the two-year program and in the last two years of the four-year program.

Freshman men and women may enter the four-year program by enrolling in the first-year Aerospace Studies Course (AS-100) at USC. Students desiring the two-year program should apply early in the fall of the year prior to the year in which they wish to enter.

Male students who are physically qualified and plan to enter pilot training receive 25 hours of free flight instruction during their last year in the program. Academic credit is granted for AFROTC courses in accordance with institutional policies governing transfer credit. The programs may lead to commissions as a second lieutenant in the United States Air Force Reserve.

Interested students should call the Air Force ROTC office at USC, 746-2670. Procedures for dual registration described on page 34 must be followed.

Army ROTC

The Army Reserve Officers Training Corps (ROTC) program is available to qualified Cal State L.A. students through the University of California, Los Angeles program. Classes are conducted at UCLA and Cal State Long Beach.

Two-, three-, and four-year programs which may lead to commission as a second lieutenant in the U.S. Army Reserve or Regular Army are offered. Participants must be physically qualified, full-time students at the undergraduate or graduate level. Academic credits earned in the program may normally be counted as electives within degree requirements.

Students enrolled during the final two years of the program receive a monthly allowance during the school year. Veterans may qualify to enter the two-year program (Advanced Course) and are eligible to receive the monthly allowance as well as G.I. Bill benefits.

Scholarships are available competitively for students in the two-year program. Winners must attend an institution offering the four-year Army ROTC program. Three-, two-, and one-year scholarships are available to students enrolled in Army Senior ROTC; students cross enrolled while attending Cal State L.A. are eligible.

For further information, contact the Cal State L.A. Counseling Center or the Department of Military Science at UCLA (213) 825-7384 or 825-7463. Procedures for dual registration described on page 34 must be followed.

The Alumni Association

The Alumni Association maintains contact between the University and its more than 55,000 graduates, keeping them informed about all phases of the University's programs and activities, and encouraging their participation.

The Association engages in an annual fund program to provide financial support for a variety of University developments. Through these efforts funds are provided for scholarships for students in need, for awards in recognition of outstanding achievements by University faculty members, including research and special projects, and other creative efforts in need of financial support.

In recent years the Alumni Association has presented two major gifts to the University. The Alumni Carillon, given in 1970, sounds the time each half hour during the day, and its electronic chimes provide music heard throughout the campus community several times each day and at the time special events are held. The Alumni Fountain and Grove, located on the plaza adjoining the Physical Sciences Building, was presented in 1973. During evening hours, the fountain's changing patterns of multi-colored lights and water display blend to make the plaza an esthetic focal point.

The Alumni Association participates actively in University affairs, with its representatives serving on University committees and in special events such as the Honors Convocation and the annual Commencement Exercises. The Association accords recognition for outstanding academic achievement to graduate and undergraduate students with the presentation of certificates at the annual Honors Convocation.

The Associated Clinics

The Associated Clinics brings together and integrate segments of the instructional programs of seven University departments, provides training facilities, and offers diagnostic and remedial services in the areas of guidance, psychology, speech, hearing, reading, and social service. In addition, the Los Angeles County Schools conduct special classes for children with communication disorders in an Associated Clinics School.

The primary objective of the Associated Clinics is to serve the instructional programs of the University by providing clinical training and research opportunities within each of the areas and across disciplines. This is accomplished through observation of the varied clinical activities and through direct services to clients, at the level of the student's clinical competence, under the guidance of experienced faculty. The services are available to the public, both children and adults, and to members of the University community when such services are not provided elsewhere at the University.

Research Organizations and Services

The faculty engages in research as an integral part of their academic discipline and professional development. Both undergraduate and graduate students participate, as research assistants or as independent investigators under faculty guidance, in research which is basic to their learning experience. The Office of Research and Governmental Relations

and the Faculty Research and Human Rights Subcommittee provide stimulus, coordination and direction to these research efforts. Support services are provided by the University Foundation, the Computing Center, and the John F. Kennedy Memorial Library.

The Computing Center

The University maintains a Computing Center which provides campuswide data processing services in support of instruction and faculty research. Instructional consultants assist with programming problems and provide orientation in the use of the computer by faculty and students.

The Computing Center has access to the systemwide timesharing service of The California State University and Colleges, and is linked to the computing facilities at the State University Data Center. Informational, record-keeping and reporting functions also are supported by the Computing Center.

The Computing Center is administered by a director, with the assistance of an advisory committee of representatives from various academic and administrative areas.

Special Study Centers

Special centers committed to various objectives related to research include the Center for the Study of Armament and Disarmament, the Latin American Studies Center, and the Bureau of Business and Economic Research. These and other research-oriented organizations engage in the acquisition and dissemination of information, issuance of publications, support of special programs aimed at bringing outstanding speakers to the campus, and seeking out sources of funds for expanding library holdings and other resources essential to research.

Center for the Study of Armament and Disarmament. The Center for the Study of Armament and Disarmament engages in research in the field of arms control, under contract or grant from both government agencies and private foundations. Members serve as speakers and consultants to other organizations sharing this interest. Visits to the Center by internationally established arms control specialists afford students an opportunity to discuss appropriate issues directly.

The Center maintains a collection of published and unpublished research materials and cooperates with similarly interested organizations in other countries. Portions of this collection are made available to the University's students, who are encouraged to pursue individual research projects under the guidance of the Center's staff.

The Center also supports a program of publications which are used as course materials at other universities as well as at Cal State L.A. Works published by the Center are distributed to university libraries, research collections, and to interested scholars.

Latin American Studies Center. The Latin American Studies Center brings together faculty members, administrators and students from a number of academic disciplines for the purpose of promoting study of the Latin American civilization. The Center's continuing services include support for the undergraduate and graduate programs in Latin American Studies, scholarly research, augmentation of library holdings, and sponsorship of guest lectures.

Center for Japanese Studies. The Center for Japanese Studies serves the University and the community as an office to aid faculty, students, and the general public in broadening and deepening their knowledge of business, economic, cultural, historical, philosophical, psychological, technical studies of Japan, as well as expanding their knowledge of the language and literature of Japan. The Center maintains basic bibliographies and essential reference materials for Japanese studies in most discipline areas, and also supports conferences, seminars, and guest lectures.

Field Station in Mexico. A field station for study and research in regional history, anthropology and geography is operated in Mexico during selected quarters by the Departments of Anthropology, Geography, and History, and the Latin American Studies Center. Upper division or graduate students with appropriate background for the work proposed and with adequate competence in Spanish may participate. Students take a full course load for residence credit and pay residence fees plus their own expenses.

Further information may be obtained from Professors William Byron (Geography), *Director*, Louis DeArmond (Latin American Studies), or Robert Ewald (Anthropology).

Bureau of Business and Economic Research. The School of Business and Economics maintains a research bureau to encourage, facilitate and communicate faculty and student research. The bureau's primary objective is to relay information concerning research opportunities and on-going research efforts to faculty members and students. In addition, it assists in the preparation of research proposals, coordinates research efforts, and provides M.S. and M.B.A. candidates with research advisement services. The bureau provides an outlet for the publication of faculty research findings through its Working Papers and Monographs series; publishes a quarterly magazine, *Los Angeles Business and Economics*; and periodically publishes proceedings of seminars and workshops.

Student Services and Activities

Educationally related services are provided for students, by a professional staff under the direction of the Dean of Students, in counseling, testing, financial aids, veterans affairs, health, employment, housing, and other special programs. Professional assistance also is offered in planning and management of the activities of student organizations.

Counseling Center

The Counseling Center offers confidential consultation in academic planning, career selection, and problems of personal or social adjustment. Special assistance is offered to undergraduate students who have not selected a major.

Foreign Student Counseling. The Counseling Center assists all foreign students attending Cal State L.A. on student visas. Services include counseling on curricular, personal, and adjustment problems, and on interpretation of forms, regulations, and certification requirements.

Additional Services. The Counseling Center sponsors a video tape study skills series, a Women's Resource Center, a University General Honors Program, and limited legal counseling.

Testing Office

The Testing Office administers tests for students applying for admission or seeking to qualify for teaching credentials. In cooperation with the Counseling Center, the Testing Office also administers specialized tests for individual students to measure aptitude, achievement, vocational interests, and personality traits.

Financial Aids

The financial aids staff counsels students in developing aid programs most appropriate to their resources and requirements. Students who need assistance may qualify for scholarships, grants, part-time employment (including work study), and long-term loans. Short-term emergency loans also are available.

Certain loans available through federal, state, and private sponsorship are offered without interest payments during University enrollment. Repayment is made after graduation over an extended period of time at low interest rates.

Children of Disabled Veterans. Students who qualify as children of certain disabled veterans of United States military services may be exempted from paying any materials and service portion of the registration fees. The *California Education Code* provides, in part, that these fees shall not be charged to any child of any United States veteran who has a service-connected disability and whose annual income, not including governmental compensation for such service-connected disability, does not exceed \$5,000. Applications for waiver of these fees are available in the Admissions and Records Office.

Veterans Affairs

Cal State L.A. is approved for the training of veterans of the military services and their dependents under educational assistance programs established by the state and federal governments. Authorization for training under all federal bills must be obtained from the Veterans Administration through its regional office at 11000 Wilshire Boulevard, Los Angeles, Calif. 90024. Veterans with no prior training under the G.I. bills are urged to request their letters of eligibility at least two months before enrolling. Those transferring from another school should submit their transfer requests at least one month before enrolling.

The Office of Veterans Affairs provides certification of enrollment for financial benefits,

liaison between the University and the VA regional office regarding benefit payments, advisement on current benefits, information on changes in legislative regulations and procedures, and counseling on financial, vocational, and academic problems.

Health Services

The Health Center serves students with health problems which pose potential interference with achievement of their educational goals. Limited direct services are provided on an outpatient clinic basis by doctors, nurses, and technicians, and by consulting specialists. Upon entrance to the University all students are required to present evidence of a negative chest x-ray. X-ray service is provided without charge at registration time.

In event of severe illness requiring hospitalization students are referred to private or community facilities. A referral file of community medical and social resources is maintained.

Since on-campus services may not meet year-round health needs of students, enrollment in a program of supplemental health insurance is recommended. Information on one such program is available at the Health Center.

Career Development and Placement

The Placement Office assists students in career development, on-campus interviews, and career counseling related to both present and projected work. Seniors who expect to graduate within three quarters may participate in on-campus interviews after registration with the Placement Office. Counseling service and information on current career opportunities are available to registered alumni. Freshmen and sophomores are encouraged to consult a placement counselor on opportunities in their academic interest areas.

Educational Placement. Eligible students and alumni are assisted in obtaining teaching and administrative positions by the Educational Placement Office in the School of Education. The office serves as a permanent repository for teaching evaluations and confidential letters of recommendation. Placement advisers in each credential area provide individualized services to bring prospective employees and employers together. On-campus interview facilities are maintained.

Part-time Employment. Students in need of part-time employment are assisted by the Part-time Placement Office.

Career Information. Information on career opportunities and requirements is maintained cooperatively by the Placement Office and Counseling Center in the Career Information Center and is open to all students.

Housing Services

No on-campus housing facilities are provided, however assistance in locating housing is provided for students and faculty by the Housing Office. The office maintains files which list names, addresses, telephone numbers, rental prices, and other pertinent information about privately owned living accommodations. Listings include rooms with or without board, work in exchange for room and board, furnished and unfurnished apartments and houses, and opportunities to share. Service is limited to maintenance of lists; no rating or inspection service is provided and Cal State L.A. does not handle negotiations between householders and prospective tenants. Because of continual changes, listings are not distributed.

Special Programs and Services

Among a number of programs and services operated at the University to meet special needs of students are the following:

Special Services Project. This is a federally funded activity designed to assist students from economically and educationally disadvantaged areas. The Learning Resource Center pro-

vides facilities, materials, and personnel to assist disadvantaged students in learning skills, such as listening, note-taking, study habits, reading, writing, test-taking, and library use. The Communication Arts Center conducts classes and workshops in photography, cinematography, journalism, and broadcasting for development of skills in mass media techniques.

Educational Participation in Communities (EPIC). This is a student volunteer service which allows students to participate in community, educational, welfare, and recreational activities. EPIC volunteers gain valuable pre-professional experience as tutors, hospital aides, teaching aides, counselors, probation officer aides, and recreation leaders. Approximately 100 agencies in the Los Angeles area cooperate.

Educational Opportunity Program. Academic and financial assistance is provided to disadvantaged students. For description of this program see page 23.

Remedial Services. Students having difficulty in arithmetic, reading, writing, and voice and diction may obtain information about non-credit remedial courses in the Office of Special Programs, Administration 713A. A modest fee is charged.

Children's Day Care Centers. The Anna Bing Arnold Children's Center and the Bullard Child Care Center, sponsored by the Associated Students, provide daytime care for children of Cal State L.A. students at a nominal cost. The Anna Bing Arnold Center is named to honor a generous supporter of this and other projects of the Associated Students. Additional spaces for children of faculty, staff, and students are available at the Department of Home Economics Child Care Center.

Aid to Handicapped Students. The Handicapped Student Service Center assists physically disabled students with counseling, registration, parking permits, medical care, classroom locations, and arrangements for readers for blind students. The center has special learning devices available and arranges for use of study cubicles.

Assistance with Grievances

The Office of the Dean of Students provides assistance to students in disciplinary matters arising out of Sections 41301 and 41302 of Title 5 of the *California Administrative Code*. Explanations are given regarding student rights and procedures in resolving grievances under the University's *Statement of Student Rights* and other University policies.

Student Activities

Opportunities are provided for students to become involved in a variety of activities, ranging from membership in small interest groups to service with members of the faculty and administration on major policy-making committees. An extensive organization of clubs, interest groups, commissions, councils, and committees gives all students the chance to participate.

As an urban center of learning without a resident student body, the University has a notable history of student participation in campus activities. Management of student affairs through a strong government organization has been accomplished by students with outstanding qualities of leadership and initiative.

The new University Union is the focal point of student social and recreational activities. Facilities include lounges, art gallery, television viewing room, billiard and games room, arts and crafts center, eating facilities, and meeting rooms. The Union also provides general office space for the Associated Students and other student organizations.

The Trident Shop, operated by the Cal State L.A. Foundation, is located on the street and basement levels of the Union. It is the campus center for textbooks, study materials, and other books and items of general interest.

The Office of Student Activities, with its staff of professional coordinators, provides student leaders and organizations with consultation and assistance in planning and implementing programs, events, and projects. These services include advisement regarding



established policies and procedures to be followed and aid in arranging for the use of campus services and facilities.

Student Government

The Associated Students, an incorporated organization in which all students hold membership, is managed by a board of directors composed of 23 elected student officers. This body formulates policy and handles the business affairs of the student body.

Commissions plan and direct student activities, including rallies, elections, tutorial projects, intercultural activities, and general convocations. Free public performances feature noted musicians, foreign films, and guest speakers.

Students serve with representatives of the faculty and administration on academic committees, governing boards, and commissions. Through such membership the students engage in development of policy and in planning and implementation of activities, such as publications, athletics, lecture programs, entertainment, art exhibits, drama, music, and debate.

Special Interest Groups

Students are welcome to join in co-curricular activities sponsored by more than 100 interest groups. These function on campus under charter provisions established by the student body, covering every phase of student life—social, cultural, religious, and political. Clubs related to academic programs are organized in such areas as education, social and political science, business, science, mathematics, and fine arts. Other clubs are organized to promote service to the campus and community.

Sororities and Fraternities

A traditional part of university life for many students is membership in the Greek organizations, which offer the chance to meet new friends and participate in an extensive program of activities. Ten fraternities and four sororities are active on campus. The Greek Council coordinates their functions.

Publications

Student publications are the *University Times*, a daily newspaper produced by journalism students; a number of special magazines, including *Los Angeles Business and Economics*, the *Diablo Engineer*, the *California Anthropologist*, and the *Pan-African Studies Journal*; scholarly magazines; *Osageyfu*, a forum for issues of concern to Black Americans; and *Mecha*, a Chicano newspaper.

Athletics

Intercollegiate athletics are an integral part of the total program of activities, involving participation by faculty, students, and administration. Major fiscal support for the athletic program is provided through allocation of student activities fees. Coaching and programming of sports is provided by faculty members in the Department of Physical Education and Athletics. These sports activities are offered for course credit in the regular instructional program of the Department of Physical Education and Athletics.

Cal State L.A. is a member of the National Collegiate Athletic Association, the Southern California Women's Intercollegiate Athletic Association, and the Association for Intercollegiate Athletics for Women. It fields men's teams in 12 sports: baseball, basketball, cross country, football, golf, gymnastics, rugby, swimming, tennis, track and field, water polo, and wrestling. Women's teams compete in basketball, field hockey, golf, gymnastics, swimming, tennis, track and field, and volleyball. There are co-educational teams in archery, badminton, bowling, and fencing.

Music

The Associated Students participate with the Department of Music in offering an extensive program of musical events. Students enroll for academic credit in music activity courses as members of organizations which represent Cal State L.A. as performing groups. Membership is open to all students who wish to participate. Music organizations include the Opera Workshop, Chamber Singers, Men's Glee Club, University Choir, University Chorus, University Nova Orchestra, Stage Band, Woodwind Ensemble, and Percussion Ensemble.

Theatrical Productions and Forensics

The Department of Speech Communication and Drama offers comprehensive programs in play production, reader's theatre, children's theatre, and forensics. The department presents at least eight major productions during the year, as well as a series of student productions in the *Theatre Showcase* project. All students are eligible to try out for casting in plays or to apply for backstage assignments.

The Reader's Theatre group offers frequent public presentations. Forensic teams participate in debate and individual events in leading intercollegiate tournaments. Students may earn credit for participation in these programs by enrolling in appropriate activity courses.

Admission

The University admits students as first-time freshmen, as undergraduate transfer students from community colleges and degree granting colleges and universities, and as post-baccalaureate or graduate students. *Categories and requirements for admission to post-baccalaureate and graduate study are stated in the Graduate Programs section, beginning on page 271.*

Undergraduate Admission

Requirements for undergraduate admission to California State University, Los Angeles are in accordance with Title 5, Chapter 1, Subchapter 3 of the *California Administrative Code*. Prospective applicants who are unsure of their status under these requirements are encouraged to consult with a high school or college counselor, or to contact the Cal State L.A. Admissions Office.

Admission of First-Time Freshmen

Applicants who have completed no college work after high school graduation will be considered for admission as first-time freshmen under one of the provisions described below. Submission of the results of either the CEEB Scholastic Aptitude Test (SAT) or the American College Testing program (ACT) is required in order to establish admission eligibility. Graduates of high schools in foreign countries are not held to this requirement.

Test Registration Information

Registration forms for either the SAT or the ACT test may be obtained from high school and community college counselors, California State University and College testing offices or direct from the testing services. For information about the Scholastic Aptitude Test write the College Entrance Examination Board, Box 1025, Berkeley, California, 94770; for the American College Test write the Registration Unit, P.O. Box 168, Iowa City, Iowa 52240.

Recommended High School Preparation

Overall excellence of performance in high school subjects and evidence of academic potential provide the basis for admission to Cal State L.A. Although no course pattern is required, high school graduates who wish to be well prepared to undertake a full program of college study should have, as minimal preparation, classes in college preparatory English, mathematics, history and/or social science, a natural science with laboratory, a foreign language, and study in speech, music, art, or other subjects contributing to a general academic background.

Residence Determination

The determination of whether students qualify as legal residents of California for admission and tuition purposes is made by a review of information in the residence questionnaire filed by all students with their applications for admission. For a summary statement on the principal rules and exceptions regarding residency determination see Appendix B.

California High School Graduates and Residents

Applicants who are graduates of a California high school or who are legal residents for tuition purposes must have an eligibility index placing them among the upper one-third of California high school graduates. The minimum eligibility index is 3072 using the SAT score, and 741 using the ACT score, and is calculated as described on the following page.

Nonresident Graduates of High Schools in Other States, Possessions

Applicants who are nonresidents for tuition purposes and who are graduates of a high school in another state, a U.S. possession, an accredited international high school, or a U.S. dependents high school, must have an eligibility index which would place them among the upper one-sixth of California high school graduates. The minimum required eligibility index is 3402 based on the SAT, or 826 based on the ACT, calculated as described below.

Eligibility Index

The eligibility index governing freshman admissions is determined from the grade point average (g.p.a.) for work completed in the tenth, eleventh, and twelfth grades of high school, exclusive of physical education and military science, and the score on either the ACT or SAT test. The index is computed either by multiplying the g.p.a. by 800 and adding the total SAT score, or by multiplying the g.p.a. by 200 and adding 10 times the composite ACT score. The complete table of grade point averages and corresponding required ACT and SAT scores is reproduced as Appendix A, page 474.

The final high school term is excluded from eligibility determination, if in progress when the application for admission is processed. The status of eligible applicants, determined on the basis of work completed, will not be altered as a result of the final term's work. However, applicants who are declared ineligible upon initial application may become eligible upon submission of a final transcript or grade report verifying improved performance.

Graduates of High Schools in Foreign Countries

Applicants, except foreign visa students, who are graduates of foreign high schools must have preparation equivalent to that required of eligible California high school graduates. Cal State L.A. reviews the previous records of all such applicants; only those with promise of academic success equivalent to that of eligible California high school graduates are admitted. Such applicants are not required to take either the ACT or the SAT, except when specifically requested to do so.

Admission of Undergraduate Transfer Students

Applicants for admission to Cal State L.A. as undergraduate transfer students must qualify under one of the provisions specified below. It should be noted that effective September 1, 1974, criteria for transferability of courses from California community colleges are based upon recommendation from those colleges.

Residents with 84 or More Quarter Units. Applicants who are California residents for tuition purposes and who have completed 84 or more transferable quarter units or the equivalent are eligible for admission if they have achieved a grade point average of 2.0 (C) on all transferable college work attempted and were in good standing at the last college attended.

Nonresidents with 84 or More Quarter Units. Applicants who are nonresidents for tuition purposes and who have completed 84 or more transferable quarter units or the equivalent are eligible for admission if they have achieved a grade point average of 2.4 on all transferable college work attempted and were in good standing at the last college attended.

Applicants with Fewer Than 84 Quarter Units. Applicants who have completed fewer than 84 transferable quarter units or the equivalent are eligible for admission if they have achieved a grade point average of 2.0 (C) on all transferable college work attempted and meet requirements currently in effect for first-time freshmen, or if they have been in full-time continuous enrollment at a college since graduation from high school and met the requirements in effect for first-time freshmen at the time of their high school graduation.

Transcript and Test Score Requirements

Undergraduate transfer students are required to comply with the following transcript and test score requirements as part of the application procedures for admission. Classifications of applicants apply as of the date of intended enrollment.

Applicants with Fewer Than 84 Quarter Units

TRANSCRIPTS: One from high school of graduation; one from each college attended.

TESTS: Score on either ACT or SAT.

Applicants with 84 or More Quarter Units; also Second Bachelor's Degree

TRANSCRIPTS: One from each college attended.

Returning Students

TRANSCRIPTS: One from each college attended since last enrollment at Cal State L.A.

Engineering Majors

TRANSCRIPTS: Two from high school of graduation; two from each college attended.

Nursing Majors

TRANSCRIPTS: One with application and one sent directly to Department of Nursing from each school of nursing and each college attended.

All transcripts become the property of the University and will not be released or copied, except for students who request that their applications be redirected to another California State University or College. Processing of applications cannot be guaranteed unless all required documents and test scores are received during the appropriate application period. Individuals who do not file an application for admission or who do not enroll in the quarter of application are advised that transcripts are retained for two years only.

Second Baccalaureate Degree

Students who have earned a bachelor's degree in an accredited institution may earn a second bachelor's degree at Cal State L.A. They are admitted as undergraduates when such an objective is specified in their applications. Admission for all other post-baccalaureate objectives is described in the *Graduate Programs* section.

Special Admission Categories

Educational Opportunity Program. The Educational Opportunity Program (EOP) provides assistance to disadvantaged students among California residents who wish to pursue a college education. It is designed for students who do not meet regular admission requirements but possess the potential and motivation to succeed, despite economic or previous educational difficulties.

In addition to special admission procedures, the program provides financial assistance, advisement by peer counselors (usually former EOP students now in regular student status) and access to the EOP Tutorial and Learning Skills Centers. Because not all applicants can be guaranteed admission, alternative opportunities should be investigated. Applications and information may be obtained from the EOP office, Room B576, Library North.

High School Non-Graduates. Applicants over 18 years of age who have not graduated from high school are considered for admission only when their preparation in all other ways is such that Cal State L.A. believes their promise of academic success is equivalent to that of eligible California high school graduates. These applicants are required to submit General Educational Development (GED) test scores, in order to establish high school graduation equivalency. Scores on the ACT or SAT also are required.

Veterans. Veterans of United States military service who are California residents may be admitted as either first-time freshmen or undergraduate transfers, even though such applicants are not otherwise eligible. Veterans who wish to be admitted under this provision should contact the Admissions Office.

High School Students. Students still enrolled in high school are considered for enrollment

in certain special programs, if recommended by their principal and if preparation is equivalent to that required of eligible California high school graduates. Such admission is only for a given program and does not constitute the right to continued enrollment.

Visitors Within CSUC. Students enrolled at any California State University or College may transfer temporarily to another CSUC campus in visitor status, if they have completed twelve units with a 2.0 grade point average at the home campus, are in good standing, and are eligible to register in continuing status. Visitor transfers are approved for one term only and are subject to space availability and enrollment priority policies at the host campus. Enrollment as visitor transfers may be repeated after re-enrollment at the home campus. This opportunity may be particularly valuable to students whose educational progress can be enhanced by attending a full summer quarter at Cal State L.A. Concurrent enrollment (see below) is not permitted during visitor status. Visitor applications may be obtained from the Admissions Office, Administration 128.

Concurrent Enrollment Within CSUC

Students enrolled in any California State University or College may enroll concurrently at another CSUC campus if they have completed twelve units at the home campus with a 2.0 grade point average and are in good standing. Concurrent enrollment is approved for a specific term, subject to space availability and registration priority policies at the host campus. Because of overlap in academic terms of campuses on semester and quarter calendars, concurrent enrollment is subject to combinations and conditions described in the concurrent enrollment application forms available from the Admissions Office, Administration 128.

Applicants Not Regularly Eligible

Applicants not admissible under one of the above provisions should enroll in extension courses, a community college, or another appropriate institution in order to meet eligibility requirements. Only under the most unusual circumstances and only by special action will such applicants be admitted to Cal State L.A.

Admission of Foreign Visa Students

Foreign visa students seeking entry to the United States on the basis of acceptance by Cal State L.A. must file a special foreign student application on forms available from the Office of Admissions and Records at least six months before the desired quarter of admission. In addition to the academic requirements outlined below for undergraduate admission, foreign students must have a minimum score of 550 on the Test of English as a Foreign Language (TOEFL), have adequate financial resources and be in good health. Those who have attended an accredited U.S. college or university for at least one year or who come from countries where English is the basic language need not take the TOEFL.

Foreign students admitted to this country on the basis of acceptance by another college are expected to complete at least one year at that college and must have completed at least two years of acceptable college work before applying for admission to Cal State L.A. The Counseling Center should be consulted for information on visas, financial assistance, housing, and related matters.

Foreign students must have completed at least two years (84 quarter units or the equivalent) of college work with a 2.4 grade point average. Student records are reviewed for frequent transfers between colleges, gaps in college attendance, downward trends in grades, and a pattern of withdrawals or program changes. An exception to the two-year requirement may be made for foreign visa students graduating from high schools in the United States or in foreign countries where the basic language is English.

Foreign visa students graduating from California high schools may be admitted as freshmen under the same requirements as native graduates of California high schools. Those

graduating from other U.S. high schools, accredited international high schools, or a U.S. dependents high school may be admitted under the same requirements as nonresident graduates of high schools in other states. Those graduating from foreign high schools in which English is the language of instruction are considered under special requirements governing admission of graduates of high schools in foreign countries described on page 22.

The U.S. Immigration Service requires F-1 foreign visa undergraduate students to carry a minimum study load of 12 quarter units. Foreign students must comply with all University and U.S. Immigration Service regulations.

General Guidelines for Applicants Presenting Foreign Records

Students with foreign academic work are required to submit official copies of academic records, along with a certified English translation. Academic records should include: (1) secondary school records; (2) yearly records from each college or university attended, indicating the number of hours per semester or per year devoted to each course and the grades received; (3) official documents that confirm awarding of the degree, with the title and date.

All official documents submitted become the property of the University. The acceptability of any foreign work will be determined by the University.

Undergraduate Application Procedures

All prospective undergraduate students, including those seeking a second baccalaureate degree, must file a complete application packet for admission within the appropriate filing period at the campus of first choice. A complete application packet includes an application, a residence questionnaire, and a \$20.00 non-refundable application fee (check or money order payable to The California State University and Colleges). Applicants seeking financial aid should also submit the preliminary aid application.

Each undergraduate applicant may file only one application for any one term with The California State University and Colleges system. An alternate campus choice may be listed on the application, but an alternate choice should be indicated only for those campuses that the applicant will attend if a first choice cannot be honored. Generally, alternate degree majors will be considered at the first choice campus before an application is redirected to an alternate choice campus. Applications of students who cannot be accommodated at their first choice campus will be considered automatically at the alternate choice campus.

A request for change of campus after an application has been filed should be directed to the new choice of campus for approval and determination that space is available. If the request can be met, the new first choice campus will direct the request to the original first choice campus for a transfer of the application. Such a change cannot be guaranteed, but will be accomplished if possible, and only for the same term for which the application was filed.

Application packets may be obtained from the Admissions Office, Administration 128, Cal State L.A., the admissions office of any other State University or College, or any California high school or community college.

Post-baccalaureate Application Procedures

Application procedures for all post-baccalaureate and graduate programs are described under "Admission to Post-baccalaureate and Graduate Study" in the *Graduate Programs* section.

Application Filing Periods

The initial filing periods for applications are the previous November for Fall Quarter, the previous June for Winter Quarter, the previous August for Spring Quarter, and the previous February for Summer Quarter. All applications postmarked or received during the initial filing period will be given equal consideration within established enrollment categories and quotas.

If any enrollment categories are not filled during the initial filing period, the University will continue to accept applications during an extended filing period until quotas are filled. Enrollment priorities within the extended period will be in chronological order of receipt of applications.

Space Reservations

Applicants who can be accommodated will receive a notice of space reservation, which is not a statement of admission but a commitment by Cal State L.A. to admit students once eligibility has been determined. When students receive notice of space reservation they also are advised of the next steps to take regarding transcripts and test scores. Students should not request that transcripts be sent until instructed to do so. Students who are permitted to file applications toward the end of an extended filing period may be required to file transcripts at the same time.

Category Quotas and Systemwide Impacted Programs

Application category quotas have been established by some campuses, in some majors, where the number of applicants is expected to exceed campus resources. All applications received in the first month of the filing period will receive equal consideration for such categories.

Impacted programs are those to which admission is limited throughout The California State University and Colleges. Applications for admission to these programs must be filed during the first month of the filing period, and supplementary criteria for admission are applied by each university or college offering these programs.

At Cal State L.A., basic nursing is the only systemwide impacted program offered. Others so designated within the CSUC system for 1976-77 are architecture, architectural engineering, aeronautical operations, construction engineering, fisheries, forestry, graphic communications, landscape architecture, natural resources, oceanography, range management, occupational therapy, physical therapy and wildlife management.

Hardship Petitions

There are established procedures for consideration of qualified applicants who would be faced with extreme hardship if not admitted to a specified campus. Prospective hardship petitioners should contact the Office of Admissions regarding policies governing hardship admission.

Reapplication After Failure to Enroll

Applicants who fail to register for the quarter for which they have been accepted will have their admission eligibility cancelled. A new application must then be filed, and admission requirements existing at the time of the new application must be met.

All transcripts on file for students who apply but do not attend are kept for two years and may be used for admission during that period. However, transcripts of any additional work completed since the original transcripts were filed must be requested by the applicant from the college(s) attended, as part of the new application procedure.

Returning Students

Students who have been absent without prior approval for any three of the four consecutive quarters prior to the quarter of reapplication must apply for readmission. An application fee is charged before reentry in such cases unless the applicant was enrolled during any of the three quarters immediately preceding the quarter of reapplication. An application with fee also must be filed by any student who enrolls elsewhere during an absence, with the following exceptions: (1) a summer session or extension program; (2) dual registration, with prior approval; (3) concurrent or visitor enrollment in another California State University or College. A student who was disqualified following the last term of attendance must file an application for admission as a returning disqualified student. For details see "Readmission," page 40.

Returning Veterans (Military or Alternative Service)

Students at the University entering active U.S. military service or approved alternative service are eligible for continuing student status following active service. Time served in active military or approved alternative service, including the entire quarter in which the student entered the service and the entire quarter in which he was discharged, will not be counted as a break in attendance in determining continuing student status.

Transfer Within State Universities and Colleges

Students enrolled in a California State University or College and eligible to continue are eligible for admission at any other institution in the system, provided they are in good standing. Students on probation at their resident campus may apply for admission as transfer students to another campus in the system, subject to that institution's policy and space availability. A complete application is required, including fee, all official transcripts, and test score reports.

Evaluation of Transfer Credit

Previous college work by undergraduate transfer students is evaluated in terms of its relationship to Cal State L.A.'s course offerings and degree requirements. This evaluation is mailed to each new transfer student and to the major department at the time of notification of eligibility for admission. General Education course requirements met by transfer courses, transfer credit accepted in satisfaction of unit requirements, and transfer courses which may apply toward major requirements are listed on this evaluation.

Conversion of Semester Units

Students attending colleges operated on the semester plan should figure each semester unit of credit earned as the equivalent of one and one-half quarter units. The following equation is used to convert semester units to quarter units: semester unit value $\times 1\frac{1}{2}$ equals quarter unit value.

Credit for Community College Work

A maximum of 105 quarter units (70 semester units) may be allowed for credit earned in a community college. Neither upper division credit nor credit for professional education courses is allowed for community college work.

Credit for Extension and Correspondence Courses

The maximum amount of credit for correspondence and extension courses which may be applied toward the bachelor's degree is 36 quarter (24 semester) units. Extension and correspondence course credit does not satisfy Cal State L.A.'s residence requirements. Students should consult their departmental advisers before taking extension or correspon-



dence courses to make sure that courses elected will meet both unit and content requirements for the degree.

No undergraduate degree credit will be allowed for University of California extension courses in the X300 or X400 series taken after Spring Quarter 1968, except as specifically approved by the individual department concerned.

Credit for Supplementary Transfer Work

In order to request credit towards a degree for work taken at other colleges or universities subsequent to matriculation at Cal State L.A., students must have official transcripts forwarded to the Office of Admissions and Records and must file a request form provided for that purpose which is available at the Admissions Information Office, Administration 128.

Credit for Military Service

Nine quarter units of lower division elective credit are allowed, upon admission, for one year or more of regular active duty in a U.S. military service including completion of basic or recruit training. Exemption also is granted from the General Education requirements in both health and physical education, but the total requirement in General Education courses remains 60 quarter units. For six months to one full year of military service, including completion of a six-month reserve training program with basic recruit training, 4½ quarter units of lower division elective credit are granted after admission. Additional credit to a maximum of 12 quarter units may be granted for completion of certain service school certificate programs.

Forms for requesting military service credit are available in the office of Admissions and Records. Students should submit a copy of their military separation, DD214, or equivalent record with their application for admission.

Military service credit is not applied toward the residence requirement.

Credit for Peace Corps Training

Peace Corps volunteers who completed their training at Cal State L.A. may earn credit up to a maximum of one and one-half quarter units for each week of the training program. The number of units and the area in which the units are given varies with each project. Grades are recorded as "Credit".

Credit for work taken at another institution while in Peace Corps training will be granted by Cal State L.A., but only as it appears on an official transcript from another college or university. The college credit will be validated when the volunteer becomes a student at this or another institution of higher education.

Advanced Placement Credit

Cal State L.A. grants undergraduate degree credit for successful completion of any examinations in the Advanced Placement Program of the College Entrance Examination Board. Students who present scores of 3 or better are granted nine quarter units of elective credit for each examination. Acceptance of Advanced Placement units for purposes other than electives is determined by the appropriate academic department.

Information concerning Advanced Placement Examinations is available at the applicant's high school. Supporting test materials are sent to the college or university indicated by the student when the examinations are taken.

College Level Examination Program (CLEP)

Credit is awarded for successful performance in certain mathematics and English examinations of the College Level Examination Program. Four quarter units may be earned in any of the following examinations in Mathematics, with passing scores as indicated in parentheses: Mathematics General Exam, 1973 edition (50, with passing subscore required on

each part); College Algebra-Trigonometry (49); Introductory Calculus, including essay (48); Statistics, including essay (49); College Algebra (50); and Trigonometry (49).

Credit for one examination in Mathematics may be applied to the quantitative reasoning requirement in Area IV of the General Education program. Credit for additional examinations is allocated to electives; acceptance for major, minor, or prerequisite use is granted on approval of the department.

Eight units of credit may be earned by students passing the English Equivalency Examination (of which a CLEP objective examination of English is a part) in any year later than 1972-73 in which it is administered. Units earned may be allocated to Area III, Humanities (Literature) and Area IV, Written Communication, of the General Education Program.

No credit for any examination will be awarded to a student who has: (1) taken the examination previously within the past year; (2) earned equivalent credit through regular course work, credit by another examination, or other instructional processes, such as correspondence study or military training; (3) earned credit previously in a course or by an examination more advanced than the level represented by the examination in question.

Credit is not awarded for CLEP examinations overlapping other examinations or college courses previously taken. Where partial overlap exists, the amount of CLEP examination credit will be prorated accordingly.

The total credit earned in external examinations which may be applied to a baccalaureate degree shall not exceed 45 quarter units, exclusive of credit for Advanced Placement Examinations.

Transfer of Credit Earned by Examination

Credit earned by examination at other accredited institutions is accepted upon transfer, provided these units have been accepted by the previous institution and are not in violation of any other regulation.

Procedures and Regulations

Information concerning University procedures and regulations contained in this section is applicable to all undergraduate students. Some general information also applies to post-baccalaureate and graduate students. Additional procedures and regulations applicable only to post-baccalaureate and graduate students are included in the *Graduate Programs* section.

Registration

Students must have been admitted to California State University, Los Angeles and have an official permit to register before registering for classes in any regular session. Registration materials are mailed in advance of registration dates to all eligible students currently enrolled and to all newly admitted or readmitted students.

Registration is conducted in four phases: (1) advisement, (2) course selection, (3) fee payment, and (4) class card pulling. Complete information concerning registration procedures is provided in the *Schedule of Classes*, issued each quarter prior to the registration period and available for purchase at the Trident Shop.

Academic Advisement

During registration for their first quarter at the University, students must consult an adviser in their major department to plan a program of study for their educational objective. A completed program of study becomes the basis for determining graduation eligibility; any changes must have adviser approval.

Newly admitted students should bring with them a copy of their high school and/or college transcripts and the copy of their admissions evaluation, if received. Students who have not yet chosen a major or wish to change majors should meet with a major department adviser or with a counselor in the Counseling Center.

Permits to Register

Students currently enrolled receive permits to register for the succeeding quarter.

Students who have been absent for the quarter preceding the quarter they plan to enroll must file a "Continuing Student Request for Permit to Register," available at the Admissions Information Center, Administration 128. Deadlines for filing requests for permits are June 1 for Fall Quarter, October 1 for Winter Quarter, January 2 for Spring Quarter, and March 1 for Summer Quarter.

If requests are filed by appropriate deadlines, permits to register are mailed; if requests are filed after the deadlines, permits may be obtained at Administration 128 during registration periods.

Students may be absent any two quarters during the year and maintain continuing student status. However, absence for more than two of any four consecutive quarters without an approved leave of absence will cancel re-registration eligibility. See "Planned Student Leaves" on page 35.

Permits to register are not released to students who were scholastically disqualified following their most recent quarter of attendance. For details, see "Readmission," page 40.

Students who attended another college or university during an absence from Cal State L.A., except for a summer session or extension program or approved visitor enrollment at another State University or College, are required to file an application for admission as a returning student, and will receive permits to register as new students.

Graduates of Cal State L.A. who wish to continue as graduate students are required to file a new application for graduate admission, and will receive permits to register as new students.

Fees and Tuition

Established fees are charged all students for certain services and activities. These include a Materials and Student Services fee and a Facilities fee, both charged in accordance with State regulations, and Student Activity and University Union fees assessed by the student body to support programs and activities of Associated Student organizations. Tuition is charged for nonresidents of California and for foreign students, but not for legal residents of California.

Schedule of Fees

Fees are paid each quarter as part of the registration procedures, in accordance with the schedule which follows. All fees, including tuition, are established by action of the Board of Trustees of The California State University and Colleges, and are subject to change without notice.

The schedule of fees in effect as of the Fall Quarter 1976 is as follows:

	1-6.0 Units	6.1 or More Units
Student Services Fee*	\$38.00	\$48.00
Facilities Fee (non-refundable)	2.00	2.00
Associated Student Fees (non-refundable)		
Student Activities		
Fall Quarter	8.00	8.00
Other Quarters	6.00	6.00
University Union		
Fall Quarter	8.00	8.00
Other Quarters	6.00	6.00

*Refundable only upon complete withdrawal. See Appendix C for detailed information.

The following fees and charges are assessed when the services indicated are rendered:

Application for Admission (non-refundable)	\$2.00
Comprehensive Examination	10.00
Credential Fee	21.00
Graduation Fee	5.00
Foreign Language Proficiency Examination	10.00
Identification Card Fee (when applicable)	2.00
Late Fee (non-refundable)	5.00
Thesis Binding Fee (not a State fee)	10.00
Transcript of Record	1.00

Tuition for Nonresidents of California

In addition to fees listed above, a nonresident tuition fee is payable by all students who have not been legal residents of the State of California for one year immediately preceding the residence determination date for the term of enrollment. For residence determination dates and a summary statement on the principal rules and exceptions which apply, see Appendix B.

The tuition charge for nonresidents is \$32.00 per unit, up to a maximum of \$480 for 15 or more units per quarter. The maximum for a nonresident student in attendance all four quarters is \$1733.

Tuition for Foreign Students

Foreign visa students are required to pay tuition fees established for other nonresidents of California. Exempted from payment of nonresident tuition through December 31, 1977, are students who are citizens of a foreign country, have been graduated from a California high school, have lived continuously in California for a least three years, and are not receiving assistance from any public or private agency or from a foreign country.

Waiver of Fees

Alan Pattee Scholarships. Children of deceased public law enforcement or fire suppression employees, who were California residents and who were killed in the course of law enforcement or fire suppression duties, are not charged fees or tuition of any kind at any California State University or College, according to Alan Pattee Scholarship Act, *Education Code* Section 23762. Students qualifying for these benefits are known as Alan Pattee scholars. For further information, contact the Admissions Office which determines eligibility.

The Student Services fee is not assessed for students who qualify as children of certain disabled veterans. See page 15.

Nonresident fees may be waived for persons who hold a valid California credential and are employed by a public school district in this state in a full-time position requiring certification. Eligible persons must meet at least one of the following conditions: (1) hold a provisional credential and enroll in courses necessary to obtain another type of credential authorizing service in the public schools; (2) hold a partial credential and enroll in courses necessary to fulfill postponed credential requirements; (3) enroll in courses necessary to fulfill requirements for a fifth year of study as prescribed at Cal State L.A.

Refund Regulations

Fees may be refunded only as authorized by Sections 41802, 41803, and 41913 of Title 5, *California Administrative Code* and other pertinent provisions of law. Whether a fee may be refunded and the circumstances under which a fee or any part of a fee may be refunded, may vary depending on the particular fee involved. Requirements governing refund may include such matters as the reason for seeking a refund (for example, death, disability, compulsory military service), the number of days of instruction which have elapsed before application for refund is made, and the degree to which the campus has provided the services for which the fee has been charged. Details concerning the fees which may be refunded, the circumstances under which fees may be refunded, and the appropriate procedure to be followed in seeking a refund are published in the *Schedule of Classes* each quarter. Application forms and information are available at the registration area.

Student Indebtedness

Sections 42380 and 42381 of Title 5 of the *California Administrative Code* authorize the University to withhold "permission to register, to use facilities for which a fee is authorized to be charged, to receive services, materials, food or merchandise, or any combination of the above, from any person owing a debt" until such debt is paid. Under these provisions, the University may withhold permission to register and may withhold other services, such as grade reports, transcripts and diplomas.

Study Load

The recommended normal full-time undergraduate study load is 16 quarter units. Students earning a C average or better may register for 18 quarter units with departmental approval. Students on scholastic probation should limit their study load to 12 quarter units or less. Authorization for more than 18 units requires prior approval, requested by petition, on a form available from the Office of Admissions and Records.

Final Examinations

Final examinations or final class meetings are required in all courses at the time and place shown in the schedule of examinations published in the *Schedule of Classes*. No final examination may be given to individual students before the regular time without the written approval of the instructor and the Dean of the School.

Repeating Courses

Students may repeat courses in which a grade of *D*, *F*, or *NC* was received. For repeated courses, only the most recent grade will be used in determining grade point average and duplicate unit credit will not be awarded. A course in which the original grade was *C* or better may not be repeated for the purpose of recalculating the grade point average for units earned.

Credit by Examination

Undergraduate students in good standing and officially enrolled in one or more residence courses may request permission to receive credit for courses by examination. The examination is interpreted broadly to include whatever activity, test, or demonstration the instructor deems appropriate for evaluating comprehension, skills, or knowledge required by the objectives for the course.

Approval is required by the chairman of the department offering the course and an instructor for the course. Forms for approval are available at the Office of Admissions and Records. Additional fees must be paid if the added units alter the total fees due for the term.

Credit by examination is restricted to undergraduate and graduate courses listed in this catalog. It is without unit limit, but does not count as residence credit. Such credit is not treated as part of the student's work load during a regular quarter and therefore does not require a petition for excess study load. Total units earned for courses and examinations taken in Summer Session, however, cannot exceed the limit established for summer study.

Grades received as the result of courses taken by examination are recorded as final grades on the permanent record and are designated as earned through credit by examination.

Credit earned by examination at other accredited institutions is accepted upon transfer, provided the units have been accepted by the previous institution and are not in violation of any other regulations.

Auditors

Students may register for classes as auditors on dates indicated in the *Schedule of Classes* for audit registration. Auditors are subject to the same fee regulations as students enrolled for credit, and fees must be paid at the time of registration. Enrollment as an auditor is subject to approval of the instructor and is permitted only after students eligible to enroll on a credit basis have had an opportunity to do so.

Regular class attendance is expected, but auditors are not required to complete assignments or take examinations. Once enrolled as an auditor, a student may not change to enrollment for credit after the last day to add classes. No entry concerning audited courses is made on student grade reports or transcripts.

Dual Registration

Undergraduate students who wish to take classes at another college or university, other than within The California State University and Colleges, while enrolled at Cal State L.A. must file a notice with the Office of Admissions and Records by the end of the third week of the quarter involved. This notification must state the exact course(s) being taken at another accredited institution and the requirement intended to be fulfilled. It must be endorsed by the student's Cal State L.A. academic adviser and the department chairman for the course(s) involved.

Courses so taken are subject to all regulations and limitations on transfer credit. To request credit toward a degree for such course work, students must have official transcripts forwarded to the Office of Admissions and Records and must file an official request form provided by that office.

Graduate Credit for Undergraduate Students

Graduate course credit may not be applied toward a bachelor's degree. In their final quarter of undergraduate study, students may apply toward graduate credit a maximum of eight units in courses beyond the minimum requirements for the bachelor's degree, provided they have maintained a minimum grade point average of 2.50 for all upper division work. Students with an average of 3.0 or more may include in this allowance *one* 500-level course. *Any course for which graduate credit is requested must be approved in advance by the graduate adviser in the department in which the master's degree is to be taken.*

Graduate credit is granted under this provision by application to the Office of Admissions and Records during the term *prior* to that in which courses are taken. Graduate credit is given for courses numbered 400 and 500 only.

Change of Program

Students are strongly advised to select classes carefully and avoid the undesirable necessity of changing their programs of study. Adding and dropping classes, including changing sections in the same course, may be done only in accordance with procedures and times indicated in the *Schedule of Classes*. *Students who fail to follow these procedures incur the risk of a grade of F.*

Withdrawal from Courses

Students may withdraw from any courses through the third week of instruction. They must obtain the instructor's signature on an add-drop card and deposit the card in a designated campus box. In such cases, no record of withdrawal appears on the permanent record.

Students may withdraw with a grade of *W* from any course continued past the third week of instruction, but must do so prior to the last three weeks of instruction. Such withdrawals are permissible only for serious and compelling reasons. Requests are granted only with the approval of the instructor and the department chairman on forms available at Administration 128.

Withdrawals are not permitted during the final three weeks of instruction except when the cause of withdrawal (such as accident or serious illness) is clearly beyond the student's control and assignment of an *I* (Incomplete) is not practicable. Ordinarily, such withdrawals involve total withdrawal from the University, except that *CR* (credit) or *I* may be assigned for courses in which sufficient work has been completed to permit an evaluation. Requests to withdraw under these circumstances are handled as described above, except that such requests must also be endorsed by the Dean of the School.

Withdrawal From the University

Students who wish to withdraw completely from Cal State L.A. are cautioned to follow withdrawal procedures outlined in the *Schedule of Classes*. Complete official withdrawal may be accomplished either by use of the special withdrawal form available at the Office of Admissions and Records, or by writing a personal request to that office. Mail requests are processed as of the postmarked date.

Planned Student Leaves

Students may petition for planned leaves for reasons such as: (a) professional or academic opportunities, like travel or study abroad, employment related to educational goals and major fields of study, or participation in field study or research projects; (b) medical reasons, including pregnancy, major surgery, or other health-related problems; (c) financial reasons, such as the necessity to work for a specified period in order to resume study with adequate resources.

Evaluation of petitions for planned leaves takes into account the student's stated plans and

the extent to which a leave would contribute to educational objectives. Students are expected to plan their time of return and their activities during the leave. They must also state why it is critical to remain in continuous residence. In the case of medical or financial leaves, they must state how they plan to remain current with or advance in their academic fields.

Undergraduate students may request leaves for no fewer than three and no more than eight quarters. Graduate students are granted a maximum of four quarters, subject to renewal. Continuing students' allowed absence of two quarters is included in these maximums.

Petitions must be filed with the Registrar after action by the department chairman (also the school graduate dean in the case of graduate students) no later than three weeks before the end of the quarter preceding the proposed leave. Approval entitles students to continuing status, provided they return no later than the quarter specified in their petitions.

Continuing students returning from leave are entitled to priority registration privileges and are not required to file for readmission; however, a request for a permit to register must be filed as stated above under "Permits to Register."

Undergraduate students retain current catalog requirements for graduation; classified post-baccalaureate and graduate students retain classified standing. Unclassified post-baccalaureate and conditionally classified graduate students who have approved programs on file in their school graduate studies office are subject to the conditions of those programs. All others are subject to the requirements in effect when they return.

Selective Service

Since no new registrants are being called to active duty, there are no new student deferments. Selective Service forms SS109 and SS103 are available to students continuing on an existing deferment. These forms and information regarding student deferments are available at the Registration Office, Bungalow L.

Transcript of Record

A transcript of work taken at the University is issued upon written request by the student to the Registrar, on forms available at the Office of Admissions and Records. The form requires the name used by the student while in attendance, the birthdate and the permanent file number (PFN). A \$1 fee is charged for each transcript.

Copies are normally mailed one week after receipt of request. However, if the request specifies inclusion of grades just earned or verification of a degree just awarded, two to three weeks must be allowed beyond the end of the term for a transcript to be issued.

Course Numbering System

Courses are numbered as shown below.

- 100-299 Lower division courses of freshmen and sophomore level.
- 300-399 Upper division courses of junior and senior level which do not earn graduate credit.
- 400-499 Upper division courses of junior and senior level which may earn graduate credit for graduate students.
- 500-599 Graduate courses for graduate students only.
- 600-699 Specialized graduate courses open only to post-Master's students matriculated in the joint Ph.D. program.
- 700-799 Courses designed primarily for post-baccalaureate students. Such courses are not acceptable toward a degree or credential program at Cal State L.A., but are acceptable for professional advancement credit.
- 800-899 Highly specialized courses designed primarily for graduate students. Such courses are not acceptable toward a degree or credential program at Cal State L.A., but are acceptable for professional advancement credit.

Courses in the 700-899 series are not listed in this catalog; their descriptions are carried in Extension Service announcements when they are offered.

Many course numbers have letter suffixes. While many indicate special uses of the course within the department, some suffixes are standard throughout the University. The letters *A, B, C, D*, and *E* indicate a sequence of courses in which, unless the description indicates otherwise, *A* must be taken before *B*, *B* before *C*, etc. The suffix *N* denotes an upper division course intended for students not majoring in the department offering it, and usually indicates different kinds of prerequisites; major students cannot count such courses in their major programs, although they may be taken as electives in addition to the major. The suffixes *CH* and *SP* in the *Schedule of Classes* or on a transcript (but not in the catalog) indicate sections of regular courses taught primarily in Spanish or Cantonese (Chinese), usually as parts of a bilingual/cross-cultural teacher training program.

Grading System

The University uses the following grade classifications for undergraduate students: *A, B, C, D, F* (traditional); *A, B, C, NC* or *CR/NC* (non-traditional). Letters *A, B, C*, and *D* indicate passing grades; *F* indicates failure.

For graduate students the following grading system applies: *A, B, C, D, F* (traditional), where *A, B*, and *C* indicate passing grades; *D* and *F* indicate failure; *CR/NC* (non-traditional), where *CR* indicates work of such quality as to warrant a grade of *B* or better in courses taken as a post-baccalaureate or graduate student (including 400-level courses). A course in which a post-baccalaureate or graduate student earns a grade below *C* must be repeated, with the grades in the original course and in the repeated course to be averaged in computing the grade point average.

Marks other than letter grades used to indicate status in courses undertaken have the following meanings:

CR is used to denote "passed with credit" when no letter grade is given. *CR* is assigned for work of such quality as to warrant a letter grade of *C* or better (a letter grade of *B* or better for graduate students).

NC is used to denote "no credit" when no letter grade is given.

SP (Satisfactory Progress) is used for courses that extend beyond one academic term to indicate that work in progress has been evaluated as satisfactory to date, but that the assignment of a final grade must await the completion of additional work. An *SP* does not add earned units and does not affect grade point or progress point calculations.

Successive enrollments in the course must not exceed the total number of units applicable to the student's educational objective. All work in the course must be completed within one calendar year of the date of first enrollment, and a final grade is assigned to all segments of the course on the basis of overall quality. Any extension of one-year time limit must receive prior authorization by the Dean of Academic Planning.

W (Withdrawal) indicates a student has been permitted to drop a course after the third week of instruction. Withdrawal requires the approval of the instructor and the department chairman. The *W* carries no connotation of quality of performance and is not used in calculating grade point average or progress points.

RD (Report Delayed) may be used in those cases where a delay in the reporting of a grade is due to circumstances beyond the control of the student. The symbol will be replaced by a more appropriate grading symbol as soon as possible. An *RD* is not included in calculations of grade point average or in determination of progress points.

I (Incomplete) signifies that a portion of required course work has not been completed and evaluated in the prescribed time period due to unforeseen but fully justified reasons, and that there is still a possibility of earning credit. It is the responsibility of the student to bring pertinent information to the instructor and to reach agreement on the means by which the remaining course requirements will be satisfied.

A final grade is assigned when the work agreed upon has been completed and evaluated. An *I* must be removed within one calendar year immediately following the end of the term in which it was assigned. This limitation prevails whether or not the student maintains continuous enrollment. An *I* not removed will be counted as equivalent to an *F* for grade point average computation.

Non-Traditional Grading Option

Undergraduate students may receive grades on a non-traditional basis, either *A*, *B*, *C*, *NC*, or *CR/NC*, under certain specified conditions. Some courses are graded only non-traditionally, as shown in course descriptions. Additionally, students in good standing who have completed at least 12 units at Cal State L.A. and students admitted in upper division standing may elect to have some courses graded on either the traditional or the non-traditional basis.

Excepted from elected *CR/NC* grading are those courses required in the student's major or credential program and other courses selected to meet required areas of General Education. General Education electives may be taken on a *CR/NC* basis, but may not then be used for any other purpose within the degree program.

A maximum of 45 quarter units may be graded *CR/NC*, whether elected or designated. A maximum of 8 quarter units elected *CR/NC* may be taken in any single quarter.

Any General Education course may be taken with *A*, *B*, *C*, *NC* grading; use of this grading may not exceed a total of 45 quarter units within the total degree program, whether elected or designated.

Students may elect to register for a course with a non-traditional grading option up to the last date in the quarter to add classes. The decision to elect an option is irrevocable. Academic standards are identical for all students enrolled in a course, irrespective of the grading system. Instructors are not notified that students have elected non-traditional options in their courses; traditional grades are reported and are converted as needed to *CR* or *NC* by the Registrar.

Grade Point Requirements

Undergraduate students are expected to maintain a 2.0 (*C*) average in all courses attempted at the University and any other college or university attended. They also are expected to make satisfactory progress toward their academic objectives.

Grade Point Average

The grade point average is computed by dividing the total number of grade points earned by the total number of units attempted. Grade points are assigned for each unit of course work undertaken, as follows: *A* (excellent), 4 points; *B* (above average), 3 points; *C* (average), 2 points; *D* (below average), 1 point; *F* (failure), 0 points. Thus, a student who earns a grade of *D* in a 3-unit course is 3 grade points below the number of grade points that would have been earned with a grade of *C*, and is therefore -3 grade points. A student who earns a *B* in a 3-unit course has $+3$ grade points, and *A*, $+6$ grade points, or an *F*, -6 grade points. The overall grade point deficiency or surplus can be computed by assigning the number of plus or minus grade points for each unit attempted, and adding algebraically.

Progress Point Scale

The progress point scale is applicable to undergraduate students only. It is computed by dividing the total number of progress points earned by the total number of units attempted. For letter grades, progress points are identical to grade points, as shown above. In addition to grade points, all courses graded *CR* and *NC* must be accounted for by multiplying each unit of course work undertaken by assigned point values, as follows: *CR*, 2 points; *NC*, 0 points. The grades *I*, *RD*, *SP*, and *W* are not counted in the progress point scale computation.

Probation for Undergraduate Students

Probation is determined separately for grade point deficiency, progress point deficiency, and administrative-academic deficiency. Students are advised of probation status as soon as the pertinent quarter's grades are recorded and grade point averages calculated.

Grade Point Deficiency: Students are placed on academic probation if either their grade point average at the University or their cumulative grade point average of work attempted at all colleges falls below 2.0. They are continued on probation for grade point deficiency until their entire deficiency is removed or until they are disqualified in accordance with the regulations stated below.

Progress Point Deficiency: Students who fail to earn twice as many progress points as total units attempted in any quarter have a progress warning recorded on their grade report for that first quarter of progress point deficiency. Students who incur a second consecutive quarter of progress point deficiency are placed on probation. Probation due to progress point deficiency can be removed by earning twice as many progress points as units attempted in the quarter of attendance directly succeeding the quarter in which probation was incurred. Students who incur a third consecutive quarter of progress point deficiency are disqualified in accordance with the regulations stated below. Probation is recorded on the student grade report only, not on the permanent record card. Disqualification is recorded both on the student grade report and on the permanent record card.

APPEAL RIGHTS: The only criteria for appeal of probation are computational error and grade changes subsequent to the beginning of probation. In either case, the appeal is made to the Office of the Registrar. Such appeal should be in writing and should list the courses taken during the quarter in question, together with the grades received. Grades that differ from those originally assigned should be so noted on the appeal.

Administrative-Academic Deficiency: Provision has been made by the Office of the Chancellor whereby students may be placed on administrative-academic probation for any of the following reasons:

- (a) Withdrawal from all or a substantial portion of courses for which they registered in two successive terms, or in any three terms.
 - (b) Repeated failure to progress toward a stated degree or program objective when such failure is within their control.
 - (c) Failure to comply, after due notice, with a routine academic requirement or regulation.
- Notice is given in writing of the conditions for removal from administrative-academic probation, as well as circumstances which would lead to disqualification should probation conditions not be rectified.

Disqualification for Undergraduate Students

Disqualification is determined separately for grade point deficiency, progress point deficiency, and administrative-academic deficiency.

Grade Point Deficiency: Students who accumulate a deficiency of 22 or more grade points at Cal State L.A. or in all college work attempted are disqualified, regardless of whether or not they were on probation during the prior term. Students on probation are disqualified if their accumulated grade point deficiencies reach the following levels:

As a *lower division student* (less than 90 quarter units completed), a deficiency of 22 or more grade points.

As a *junior* (90–134 quarter units completed), a deficiency of 13 or more grade points.

As a *senior* (135 or more quarter units completed), a deficiency of 9 or more grade points.

Progress Point Deficiency: Students are subject to disqualification if, during their second successive quarter of probation for progress point deficiency, they have failed to earn twice as many progress points as all units attempted during that quarter.

Probation and disqualification are determined separately for the grade point average and the progress point scale. Deficiency in either is a basis for probation with possibility of disqualification subsequently. While grade point deficiencies are cumulative, progress point deficiencies exist only for the quarter in which they occur.

Administrative-Academic Deficiency: Provision has been made by the Office of the Chancellor whereby students placed on administrative-academic probation may be disqualified for any of the following reasons:

- (a) The conditions for removal of administrative-academic probation are not met within the period specified.
- (b) Students become subject to academic probation while on administrative-academic probation.
- (c) Students become subject to a new period of administrative-academic probation for the same or similar reasons as in a previous probationary period, although not currently in such status.

Notification of Disqualification

The first notice of disqualification is shown on the grade report. A formal letter of disqualification also is sent by the Registrar, but it may not arrive until after the beginning of the new quarter.

Disqualified students are advised to arrange an exit interview with their academic adviser in order to establish readmission requirements. The Counseling Center will assist students who have not declared a major.

Disqualified students may submit a petition for immediate reinstatement to the dean of their School or designee (department chairman for the School of Letters and Science). Petitions must be filed before the end of the fifth week of the quarter following disqualification.

Immediate reinstatement may be granted for not more than two successive quarters to students pursuing the program in which disqualification was incurred, including an undeclared major. Students who are admitted by exception to transfer grade point requirements, and whose grades at Cal State L.A. alone are not the basis for disqualification, may qualify for immediate reinstatements in additional quarters.

Students enrolled but not officially reinstated for the quarter following disqualification should file a request for complete withdrawal and full refund of fees by the fifth week of the quarter. Official withdrawal and refund application forms are available at the Registration Area. Complete withdrawal may also be accomplished by writing to the Office of the Registrar.

Registration will be cancelled for disqualified students who are enrolled and do not file a withdrawal request; fees are not returned in these cases.

Readmission

In no sense is readmission automatic. Disqualified students will not be considered for readmission until at least two quarters have elapsed. Normally, students will be eligible for readmission when they have satisfied conditions and requirements established during the exit interview.

Basic readmission rules provide the following: (1) no upper division student (at least 90 units) will be readmitted who has a deficiency of 22 or more grade points for all college work attempted; (2) no lower division student (less than 90 units) will be readmitted with *any* grade point deficiency for all college work attempted. Units earned elsewhere while disqualified cannot be used to reduce the Cal State L.A. deficiency.

Before the appropriate readmission deadline, disqualified students must file an application

for admission as returning disqualified students. Application and deadline information is available at the Office of Admissions and Records. Official transcripts of all work completed since disqualification must be furnished.

Readmission Appeals Procedure

Students who have not met requirements established at the time of the exit interview will be ineligible for readmission and will be so notified by the Office of Admissions and Records. Students may appeal this decision by submitting a petition to the dean of their School, or to the Director of Counseling and Testing if they have not declared a major. Petition forms may be obtained from the Office of Admissions and Records.

Integrity of Scholarship and Grades

The University expects both students and faculty to conscientiously protect the validity of grades. All academic work is expected to be done by the student to whom it is assigned, without unauthorized aid of any kind, and instructors are expected to exercise care in the planning and supervision of academic work, so as to encourage honest effort.

Instructors have the responsibility of taking appropriate action if instances of cheating are discovered. They may give a failing grade to the student on the assignment or for the course, and may at the same time recommend to the Dean of Students that the student be dismissed.

Rules of Conduct

The rules and regulations governing student behavior at The California State University and Colleges are set forth in Title 5, Chapter 5, Subchapter 3 of the *California Administrative Code*. The applicable sections are in Appendix D of the Directory section. Copies of the *Student Disciplinary Procedures of The California State University and Colleges*, which govern enforcement of these regulations, are available in the Office of the Dean of Students.

Student Rights

An official *Statement of Student Rights* enumerates the rights guaranteed to Cal State L.A. students and the procedures to be followed for redress of grievances. Copies of this document are available in the Office of the Dean of Students.

Privacy Rights of Students

The federal Family Educational Rights and Privacy Act of 1974 (20 U.S.C. 1232g), sets out requirements designed to protect the privacy of parents and students. Specifically, the statute governs (1) access to records maintained by the campus, and (2) the release of such records. In brief, the statute provides that the campus must provide students access to official records directly related to the student and an opportunity for a hearing to challenge such records on the grounds that they are inaccurate, misleading or otherwise inappropriate; the right to a hearing under the act does not include any right to challenge the appropriateness of a grade as determined by the instructor. The act generally requires that written consent of the student be received before releasing personally identifiable data about the student from records to other than a specified list of exceptions. An office and review board has been established by the Department of Health, Education and Welfare to investigate and adjudicate violations and complaints under the act. The office designated for this purpose may be contacted at the following address: Mr. Thomas S. McFee, Room 5660, Department of Health, Education and Welfare, 330 Independence Avenue, S. W., Washington, D. C. 20201.

Cal State L.A. is authorized under the act to release public directory information concerning students. Directory information includes the student's name, address, telephone list-

ing, date and place of birth, major field of study, participation in officially recognized activities and sports, weight and height of members of athletic teams, dates of attendance, degrees and awards received, and the most recent previous educational agency or institution attended by the student. The above designated information is subject to release by the campus at any time unless the campus has received a prior written objection from the student specifying information which the student requests not be released.

Honorable Dismissal

Honorable dismissal is granted to any student who is not under financial obligation to the University and who is not under disciplinary probation, suspension or expulsion. Academic disqualification does not constitute dishonorable dismissal.

Waiver of Regulations

Rules and regulations in this catalog have been adopted by the faculty and administration to maintain appropriate academic standards and facilitate the administration of the programs of the University. A student who finds that extenuating circumstances might justify the waiver of a particular regulation may file a petition with the Office of Admissions and Records, according to established procedures, for consideration by a faculty committee.

Undergraduate Programs

California State University, Los Angeles offers programs leading to the degrees of Bachelor of Arts, Bachelor of Music, Bachelor of Science, and Bachelor of Vocational Education. Academic majors, and the options within some of them, are listed on the following page.

General Requirements for Bachelor's Degrees

The Bachelor of Arts degree requires the satisfactory completion of 186 quarter units. The Bachelor of Music degree requires 198 quarter units. The Bachelor of Science degree requirement varies from 186 to 198 quarter units, as specified individually for each degree program. Counted in the total unit requirements for each of these degrees is a minimum of 60–62 units in General Education courses, including the units necessary to complete the mandatory requirements for the U.S. Constitution and American History and Ideals. For each degree a minimum of 60 quarter units must carry upper division credit (300–400 numbered courses).

Complete description of curricula and courses of instruction, along with specific regulations and requirements appropriate to individual areas of study, are set forth in the sections of the catalog beginning on page 55. The baccalaureate programs and the subject matter portions of the teaching credential programs in the 43 academic departments and the nine interdisciplinary programs are arranged in alphabetical order. Professional education requirements for the basic credential programs are listed under appropriate Education departments in this section; specialist and administrative credential requirements are in the *Graduate Programs* section of this catalog. Students are expected to familiarize themselves with all requirements for graduation.

In addition to the baccalaureate degree programs, the University offers courses of instruction in Arabic, astronomy, Chinese, Hebrew, Latin, photography, and Russian.

Special Major for Bachelor's Degrees

The special major for the Bachelor of Arts or Bachelor of Science degree provides an opportunity for selected students to engage in individualized courses of study leading to a degree when appropriate academic and professional goals are not accommodated by standard degree majors. Programs for the special major consist of correlated studies in two or more fields. It is not intended as a means of bypassing normal graduation requirements, or an alternative means of graduating for students who have failed to complete requirements in a previously designated major.

A candidate for the special major must have more than one full year (45 units) of academic work remaining to complete minimum requirements for a degree. Neither lower nor upper division courses applied to General Education requirements may be counted toward fulfillment of minimum requirements for the major.

Approval of the special major is based upon individual justification. Further information is available from the office of the associate dean for academic affairs in each school.

Multiple Majors

Students who wish to have multiple majors for one bachelor's degree listed on their transcripts must:

- (1) Fulfill all departmental requirements in the several majors.
- (2) File a request endorsed by the several departments to the dean(s) of the appropriate school(s).
- (3) Be approved and recommended for graduation by the faculties of *each* major department.

Baccalaureate Degrees Offered

**Degree program offering Credential Option*

Bachelor of Arts Degrees

Afro-American Studies

American Studies

Anthropology*

Art*

Options: Art History, Design
Painting, Sculpture, and Graphic Arts
Ceramics, Metals, and Textiles

Biology

Chemistry

Child Development*

Comparative Literature

Drama

Economics

Options: Social and Behavioral Sciences
Applied Economics, Preprofessional

English

French

Geography*

Geology

German*

Health and Safety Studies

History*

Home Economics*

Industrial Arts

Japanese*

Options: Japanese Language and
Literature, Japanese Area Studies

Journalism

Latin American Studies

Liberal Studies

Mathematics*

Options: Pure Mathematics

Computer Science and Numerical
Methods, Statistics

Mexican American Studies*

Microbiology

Music

Philosophy

Physical Education

Physics

Political Science*

Options: General, International Relations
Pre-Legal, Public Administration

Psychology*

Radio and Television Broadcasting

Social Science

Social Welfare

Sociology*

Spanish

Speech Communication

Speech Pathology

Special Major

Urban Studies

Bachelor of Music Degree

Options: Keyboard Performance, Instrumental Performance, Vocal Performance

Bachelor of Science Degrees

Biochemistry

Biology

Option: Environmental Biology

Business Administration

Options: Accounting, Business Arts,
Business Economics and Statistics,
Business Information Systems,
Finance, Insurance
Labor Relations, Management
Marketing, Office Administration
Real Estate, Special Business
Transportation

Business Education

Chemistry

Criminal Justice

Options: General,
Investigations, Administration
Correctional Management

Engineering

Options: Civil, Electrical,
Mechanical, Special

Environmental Health Science

Geology

Home Economics

Option: Food and Nutrition

Industrial Technology

Options: Fire Protection Administration,
Printing Management

Management Science

Mathematics*

Options: Applied Mathematics

Computer Science and Logical Design

Medical Technology

Nursing

Options: Acute Care

Primary Care, Mental Health

Physics

Also Options: Biophysics

Radiological and Health Physics

Recreation

Special Major

Bachelor of Vocational Education Degree

For vocational teachers; see Department of Industrial Studies.

Second Baccalaureate Degree

With the approval and recommendation of the faculty, students may qualify for a second bachelor's degree if they complete General Education requirements then in effect and meet scholarship requirements for seniors.

Those who earned their first bachelor's degree from another institution must complete requirements for a new major as specified by the department, and earn a minimum of 36 quarter units in residence at Cal State L.A. following the date of the first degree.

Students completing a baccalaureate program at Cal State L.A. may qualify for a second bachelor's degree in a term subsequent to the date of the first, if they complete requirements for a major in a different academic field as specified by the department, and earn a minimum of 36 quarter units in residence beyond the requirements for the first degree.

Units included in a second baccalaureate program may not apply to graduate degrees.

Minors

Although not required for a baccalaureate degree, minors are available in many fields that will help strengthen the student's preparation in areas related to the major field or to career choices. The minor field will be noted on the student's transcript if the individual program has been approved by the offering department and is completed at the same time as the work for the degree itself. Interested students should consult an adviser in the department offering the minor of their choice.

Cooperative Education

The Cooperative Education program is designed to meet unique educational needs of students by integrating classroom studies with related on-the-job experiences. It permits students to earn a maximum of 6 quarter units of elective credit toward an academic major or minor, based on one unit for each eight hours of work per week.

Admission to Cooperative Education courses, numbered 398 in each participating department, is arranged through the coordinator for the department in which the student is majoring. The program currently is offered in art, engineering, health and safety studies, home economics, industrial studies, journalism, physical education and athletics, criminal justice, political science, recreation, sociology, and speech communication.

Eligibility for enrollment in these courses requires an overall g.p.a. of 2.35, completion of 45 quarter units of course work and permission of the department. Students are required to maintain an average of C or better, and to be carrying six units or more of course work in addition to the Cooperative Education course. Approved employment, periodic conferences, and written reports are required.

Internship in Public Service

The Internship in Public Service program combines individual instruction with practical experience in government agencies and quasi-public enterprises. Enrollment usually is restricted to Political Science majors. The program operates similarly to the Cooperative Education program described above, except that the maximum of 6 units earned may be counted only for upper division elective credit rather than toward the major. A qualifying civil service examination is required for admission to some internship programs. Information concerning opportunities and qualifications may be obtained from the coordinator in the Department of Political Science.

Preprofessional Study

Students who wish to prepare for professional study in the fields of law, librarianship, or medicine and comparable fields will find specialized counseling and advisement at Cal State L.A. Such preprofessional advisement is separate from and in addition to major program advisement. Students are urged to consult current catalogs of professional schools available in the Reference Room of the Library.

Law. Students who wish to prepare to study law are expected in most instances to earn a bachelor's degree in a relevant academic field and to acquire a good foundation in English, history, economics, logic, political science, psychology, and sociology.

The pre-legal option for the Bachelor of Arts in Political Science and the Business Arts option for the Bachelor of Science in Business Administration are recommended as acceptable interdisciplinary programs. A pre-law minor is also available in the Department of Political Science. Other programs could be taken which would be equally acceptable for admission to schools of law. Preprofessional advisement is available in the Department of Political Science and the Department of Finance and Law.

Pre-law students are expected to take the Law School Aptitude Test (LSAT) in the fall quarter of the year preceding their anticipated admission to law school. Application should be made soon after the beginning of the fall quarter in the Political Science department office.

Librarianship. Librarianship encompasses a broad variety of skills and interests, and provides opportunities for every kind of subject major, including art, music, economics, political science, sociology, liberal arts, the natural and physical sciences, and increasingly, business administration and computer technology. Librarians irrespective of subject specialties are concerned with the organization and use of recorded information.

Most professional library positions today require the master's degree in library science, which represents one year of study beyond the bachelor's degree. In addition to the baccalaureate, candidates for admission to a graduate library school usually must have a superior academic record, one foreign language, and acceptable scores on the Graduate Record Examination. Names of librarians who may be consulted for additional information and advice are available in the office of the John F. Kennedy Memorial Library.

Medicine and Other Health Science Fields. In general, students planning to enter a school of dentistry, medicine, optometry, pharmacy, podiatry, or veterinary medicine are advised to elect a major related to their own interests, and include appropriate science courses as part of their major, General Education or elective program. Medical schools expect students to show proficiency in English, mathematical reasoning, and fundamentals of physical and biological sciences. Some medical schools also require work in the social sciences, humanities and a foreign language. Most now expect completion of a baccalaureate degree program.

The advisory committee for preprofessional students in medical and related fields consists of faculty members in the Departments of Biology, Chemistry, Microbiology, Physics, and Psychology, and a representative of the Student Health Center medical staff. Medical sciences advisement and recommendations are coordinated through the Health Sciences Advisement Center in Biological Sciences 243. Students planning careers in these areas should visit the center for guidance on programs and application procedures, irrespective of declared majors. The center staff has prepared a number of brochures on the various health science careers which answer most of the student's initial questions. The center also contains current catalogs for every health science professional school in the United States as well as information on foreign schools, financial aids, and alternative careers.

General Education Requirements

All students seeking a baccalaureate degree are required to include in their program of studies courses in the natural sciences, social sciences, humanities, and basic subjects, such as oral and written communication, logic, mathematics, and statistics, "designed to facilitate the acquisition and utilization of knowledge in the natural sciences, the social sciences and the humanities," (Section 40405 of the *California Administrative Code*, Title 5). Additionally, they must "demonstrate competence in the Constitution of the United States and in American history, including the study of American institutions and ideals, and of the principles of state and local government established under the Constitution of this state . . ." (Section 40404, *ibid.*)

The required minimum is 60–62 quarter units, of which eight are allocated for study of American history and state and local government. Students who enroll as first-time freshmen or transfer in lower division standing are required to take 62 units, unless exempted from physical education activity; upper division transfer students and all others exempted from physical education activities are required to meet the mandated minimum of 60 units.

General Education requirements completed in an accredited college by a student who transfers to a California State University or College are accepted to the extent stated in the certification recorded on the transcript.

Selection of General Education Requirements

To satisfy the requirements in General Education, students select courses from the list for each area. Electives are taken as needed to complete the total unit requirement. Health and physical education requirements, although not mandated by the State Code, comprise a sixth area in the Cal State L.A. General Education program.

Upper division transfer students whose General Education programs have been certified as having met all Title 5 requirements will not be required to complete additional General Education courses at Cal State L.A. Those whose General Education programs are not certified will need only 60 quarter units which meet all area requirements except two units of physical education activities.

I. NATURAL SCIENCES (Minimum of 12 quarter units required)

Courses must include both a physical and a biological science. At least eight units, including one quarter unit of laboratory experience, must be taken from the following: astronomy, biology, chemistry, geology, microbiology, physics.

Physical Sciences

*Astronomy 151 Prin of Astronomy (3)
 *Astronomy 152 Prin of Astron: Lab (1)
 Chemistry 101 General Chem I (5)
 Chemistry 102 General Chem II (5)
 Chemistry 103 General Chem III (5)
 *Chemistry 151 Fund of Chem I (5)
 *Chemistry 152 Fund of Chem II (5)
 *Chemistry 153 Fund of Chem III (5)
 Chemistry 158 Chem and Survival (4)
 Geography 160 Physical Geography (4)
 *Geology 150 Physical Geology (4)
 *Geology 151 Phys Geol Field Lab (2)
 Geology 152 Historical Geology (4)
 *Geology 155 Oceanography (4)
 *Geology 157 Physical Geol Lab (1)
 *Geology 421 Geology of Calif (4)
 *Geology 422 Environmental Geol (4)
 Physics 101 Physics I (4)
 Physics 102 Physics II (4)
 Physics 103 Physics III (4)
 *Physics 150 Principles of Physics (4)
 *Recommended for non-majors in science.

Physics 154 Selected Topics in Physics .. (4)
 *Physics 155 Nature of Phys World (4)
 Physics 201-206 Gen Physics (4 each)
 Physics 402 Radiation Biophysics (4)

Biological Sciences

Anthropology 260 Physical Anthro (4)
 Biology 101 Biology of Animals (5)
 Biology 102 Biology of Plants (5)
 *Biology 150 Introductory Botany (4)
 *Biology 151 Prin of Population Biol (4)
 *Biology 152 Animal Life (4)
 *Biology 165 Man and Biol Environ (4)
 *Biology 168 Marine Biology (4)
 *Biology 200AB Human Anatomy and Physiology (5-5)
 Biology 220 Plant Kingdom (3)
 Biology 361N Ecology of Urban Environ . (4)
 *Microbiology 150 Prin of Microbio (4)
 Psychology 201 Elem. Physiological Psychology (4)

II. SOCIAL SCIENCES (Minimum of 12 quarter units required)

Courses must be selected from at least three of the following fields: anthropology, business, Chicano studies, economics, engineering, geography, history, Pan-African studies, political science, psychology, and sociology. Courses taken to satisfy the mandatory Title 5 requirements in U.S. Constitution and American history and ideals may not be used to satisfy requirements of this section; these are covered in Area V below.

Anthropology 250 Cultural Anthro	(6)	History 102D East Asian Civilization	(4)
Business 308 Bus Respons in Soc	(4)	History 102E Latin Amer Civilization ...	(4)
Chicano St 111AB Intro to Chicano Culture	(4-4)	History 150 Asian-American Hist	(4)
Chicano St 150 Chicano Contemp Politics	(4)	<i>Note:</i> In addition to courses listed above, all 400-level History courses except 497 and 499 are acceptable for General Education credit.	
Economics 150 Econ for the Citizen	(4)	Pan-Afr St 250AB African History	(4-4)
Economics 200AB Prin of Econ I, II ..	(4-4)	Pan-Afr St 251AB Afro-American History	(4-4)
Economics 301 Econ for Soc Sci	(6)	Pan-Afr St 420 Afro-American Culture	(4)
Economics 390 Current Econ Prob	(4)	Pol Sci 250 World Politics	(4)
Engineering 250 Impact of Tech on Society	(4)	Psychology 150 Human Behavior	(4)
Engineering 352 Technological Aspects of Urban Environment	(4)	<i>(Advised for students who expect to apply for teaching credential.)</i>	
Geography 150 Human Geography	(4)	Sociology 201 Intro Sociology	(4)
History 101ABC Western Civiliz	(4-4-4)	Sociology 202 Social Problems and Institutions	(4)
History 102A African Civilization	(4)	Sociology 250 Individual and Society	(4)
History 102B Middle East Civilization	(4)		
History 102C Intro South Asian Civiliz ..	(4)		

III. HUMANITIES (Minimum of 12 quarter units required)

This area includes fine arts, foreign languages, literature and philosophy. Courses selected must represent at least two of these four fields.

Fine Arts

Art 102 Intro to Clay and Ceramic Processes	(3)	Art 466 Nineteenth Century Art	(4)
Art 103 Design I	(3)	Art 471 History of Costume I	(4)
Art 104 Intro to Drawing	(3)	Art 476 Early Christian and Byzantine Art	(4)
Art 106 Survey of Western Art I ..(4)		Chicano St 257 Folk Music Ensemble of Mexico	(2)
Art 111 Survey of Western Art II	(4)	Chicano St 258 Folk Dances of Mexico ..	(1)
Art 151 Intro to Art	(3)	Chicano St 446 Folklorico Dance: Living Hist of Mexico and Southwest	(4)
Art 202 Intro to Textiles/Weaving	(3)	Drama 152 Analysis of Drama	(4)
Art 203 Design II	(3)	Music 150 Music in World Culture	(4)
Art 207 Intro to Metals/Enamels	(3)	Music 351 Understanding Music Lit	(4)
Art 234 Intro to Painting	(3)	Music 451 Contemp Amer Music	(4)
Art 244 Intro to Life Drawing	(3)	Music 452 History of Jazz	(4)
Art 351 Art Appreciation	(3)	Music 453 Folk and Tradit Music of Western World	(3)
Art 406 Ancient Near-Eastern Art and Archeology	(4)	Music 456 Folk and Tradit Music of Eastern World	(3)
Art 411 Greek and Roman Art	(4)	Music 470 History and Literature of American Music	(4)
Art 416 Medieval Art	(4)	Pan-Afr St 421 Afro-American Music	(4)
Art 421 Baroque Art	(4)	Pan-Afr St 425 Black Dialect	(4)
Art 426 Twentieth Century Art	(3)	Philosophy 475 Aesthetics	(4)
Art 431 Oriental Art	(4)	Phys Ed 350 Dance in World Culture	(3)
Art 436 Renaissance Art	(4)	Sp Comm 268 Reader's Theatre: Practicum and Performance	(2)
Art 441 American Art	(4)	Sp Comm 467 Aesthetic Bases of Speech	(4)
Art 446 Art of Latin America	(4)		
Art 460 Multi-Cult Approach Visual Arts	(4)		
Art 461 Oceanic and North American Indian Art	(4)		

Foreign Languages

Any undergraduate foreign language or literature course may receive General Education credit except courses in phonetics or phonology, or courses numbered 399 and 499. Students with previous background in the foreign language should select, with the help of a Foreign Languages department adviser, a course appropriate to their level of proficiency. Foreign language majors/minors may not earn General Education credit in Area III for courses in their major or minor.

Literature

Drama 311	Devel of World Theatre I (4)
Drama 312	Devel of World Theatre II . . . (4)
Drama 313	Devel of American Theatre . . (4)
Drama 460	Studies in Sel Dramatists . . (1-4)
Drama 461	Nature of Dramatic Comedy . (4)
Drama 462	Nature of Dramatic Tragedy . (4)
Drama 463	Shakespeare as Living Th . . . (4)
Drama 472	Hist and Analysis of Lyric Theatre (4)
English 221	Interpreting Fiction (4)
English 222	Interpret Dramatic Lit (4)
English 223	Interpreting Poetry (4)
English 250	Understanding Lit (4)
English 251	Black American Lit (4)

English 258	Mythology in Lit (4)
English 354	Selected Topics in Lit (4)
Pan-Afr St 422	Themes in Black Lit (4)

Note: English 221, 222, and 223 are used for majors in Comparative Literature and in English and are recommended for students enrolled in other majors with strong literary emphasis. In addition to courses listed above, the following 400-level literature courses in English are acceptable as General Education courses: 416, 417, 418, 419, 424, 427, 428, 440, 447, 460, 461, 463, 464, 465, 467, 468, 471, 472, 473, 475, 478, 479, 480, 481, 482, 484, 485, 486.

Philosophy

Philosophy 150	Philosophical Ideas (4)
Philosophy 220	Contemp Moral Prob (4)
Philosophy 304	Ethics (4)
Philosophy 311	Hist of Ancient Phil (4)
Philosophy 313	Hist of Modern Phil (4)
Philosophy 314	Hist of Recent Phil (4)
Philosophy 410	Social and Polit Phil (4)
Philosophy 430	American Phil (4)
Philosophy 440	Contemp Phil (4)
Philosophy 470	Theory of Knowl (4)
Philosophy 475	Aesthetics (4)
Philosophy 485	Phil of Science (4)

IV. BASIC SUBJECTS (Minimum of 12 quarter units required)

Requirements in this area are 8 units in communication and at least 4 units in quantitative reasoning.

COMMUNICATION

Courses in *both* oral and written expression are required.

Oral	Written
Speech Comm 150	Oral Comm (4)
	English 150AB
	Written Comm I, II . . . (4-4)

QUANTITATIVE REASONING

Logic	Math
Philosophy 250	Logic (4)
	Math 120AB
	Elem Math for Tch (4-2)
Mathematics	Math 206-209
Math 102	College Algebra (4)
	Calculus I-IV (4-4-4-4)
Math 103	Algebra and Trig (4)
	Math 216-219
	Elem Anal I-IV (4-4-4-4)
	Math 353
	Finite Math Applie (4)

V. STATUTORY REQUIREMENTS (Minimum of 8 quarter units required)

The requirements in American history, the U.S. Constitution, and state and local government may be met by optional examinations, by appropriate transfer courses, or by successfully completing one course in each of the following groups:

(1). U.S. History, including American Institutions

History 202A (4) or 202B (4)

(2). U.S. Constitution Political Science 150* (4) or 305 (4)**(3). California State and Local Government**

Political Science 150* (4) or 200 (3) or 403 (4)

*NOTE: Political Science 150 satisfies both groups 2 and 3.

Of these courses, 8 units are allocated to the General Education program. Students who transfer with a single course certified as meeting this requirement will need an added General Education elective course to meet the minimum requirement in total units.

Students electing to satisfy these requirements by examination may do so only while enrolled at the University. Information and application forms for permission to take the optional examinations may be obtained from the American Institutions Committee in the Departments of History or Political Science. Those who pass the waiver examinations must take a corresponding number of units for additional General Education electives.

VI. HEALTH AND PHYSICAL EDUCATION (3–6 quarter units required)

One course is required in health. Physical education activity courses are required of all students under the age of 21 at the time of first enrollment at Cal State L.A., unless medically exempted by petition, or requirement is met by transfer courses.

<i>Health</i>		<i>Physical Education</i>
H&S 150	Basic H&S Studies (3)	Physical Education activity courses accepted for General Education are those numbered 151, 152, 153, 156; 251, 252, 253, 256; 351, 352, 353, 356; all intercollegiate athletics; 372, 379.
H&S 350	Health Maintenance Prob (3)	
H&S 360	Selecting Health, Med Serv and Products (3)	
H&S 455	Sex Info for Health Educ (3)	
H&S 456	H. St. on Dang. Drugs, Narc., Alco., Tobac. (4)	

Electives

To bring the total credits in General Education to the required minimum of 60–62 quarter units students may select any courses outside their major department for which they meet prerequisites, except methods courses in Education.

Except where otherwise restricted, students required to take an introductory course in a major that is equivalent to a General Education course in Areas I–VI may apply the units earned toward both the major and General Education requirements.

Report of Transfer Credit Evaluation

The official evaluation of transfer credit issued by the Office of Admissions and Records to transfer students shows those courses which have been accepted for the General Education requirements at Cal State L.A. and those courses remaining to be taken. Determination of the catalog issue governing these requirements is explained below.

Requirements for Graduation

Unless exception is requested under one of the provisions below, students enrolling at Cal State L.A. for the first time must meet graduation requirements specified in the catalog in effect at the time of entrance.

Election of Degree Requirements

Undergraduate students who maintain continuous attendance at any California State University or College, or any accredited California community college and thereafter at Cal State L.A., may elect to graduate under those requirements in effect at this University for their degree programs, alternatively, at the time of first matriculation in either institution, or at the time of graduation. In this context, continuous attendance implies that the student will register for and have a grade assigned (except for *W*) in at least one course during each quarter in which attendance is claimed.

All other transfer students and those students who have not maintained continuous attendance will be held to the program requirements in effect at the beginning of their last period of continuous attendance at Cal State L.A., or alternatively, at the year of graduation.

When a student changes to a new major, the requirements for the major become those in the catalog in effect at the time of change. If courses described under earlier requirements are no longer available, the major department may require appropriate substitutes.

Election of General Education Requirements

General Education is a continuing component of the total requirements for graduation. Students who maintain continuous attendance as defined above normally will meet General Education requirements in accordance with catalog provisions in effect at time of entrance. However, they may elect to meet the General Education requirements set forth in the catalog in effect either at the time of the first matriculation or of their graduation and need not meet major requirements from the same catalog.

Students must fulfill all General Education provisions set forth in the catalog issue they elect for that purpose. If courses described under earlier requirements are no longer available, appropriate substitutes must be selected from the current list of courses approved for the area in question. For all requirements, election of any catalog will not extend beyond ten years after its designated academic year.

Residence Requirement

A minimum of 36 quarter units must be earned in residence at Cal State L.A. for the bachelor's degree. Credit earned in Summer Session may be applied toward this residence requirement. Credit earned in extension courses or by examination may not apply toward the residence requirement. Of the final 30 quarter units counted toward the bachelor's degree, at least 18 units must be completed at Cal State L.A. Therefore, not more than 12 units of the last 30 may be completed at another college.

Scholarship Requirements

In addition to meeting total unit requirements for graduation, students must also satisfy specific scholarship requirements. A minimum grade point average (g.p.a.) of 2.0 (C on a 5-letter scale) must be met for (a) all courses attempted, including those accepted by transfer from another institution, (b) all courses required for the major, and (c) all units attempted at Cal State L.A.

Application for Graduation

Application for graduation is made on a form obtainable from the Office of Admissions and Records Administration 128 or 414, or academic department offices. Permission to apply for graduation must be granted by the candidate's major department before the completed application form and diploma fee are brought to the Cashier's Office, Bungalow D, for payment of the fee.

In order to receive a graduation check report during the final quarter of undergraduate study, the application must be filed by the last day of the quarter preceding the final quarter of study. If a graduation check report is desired before the beginning of the final quarter of study, the application must be filed a full quarter earlier. Applications submitted during the final quarter of undergraduate study are not completed until the following quarter.

A graduation application is not subject to withdrawal if graduation requirements have been met by the end of the quarter for which application was filed. Degrees are granted as of the end of the quarter in which all requirements are met.

Recognition of Academic Excellence

The University recognizes superior academic achievement by conferring honors upon students with outstanding records at an Honors Convocation held during the Spring Quarter of each year and at the annual Commencement Exercises in June. Recognition is accorded at the annual Honors Convocation to undergraduate students placed on the Dean's List, Honors at Entrance, and both undergraduate and graduate students selected by their major departments to receive Alumni Association Certificates of Honor. Also recognized at the Honors Convocation are winners of academic scholarship awards and

juniors and seniors elected to membership in Phi Kappa Phi, national honor society. The requirements for Dean's List, Honors at Entrance and Certificate of Honor students are as follows:

Dean's List: Undergraduate students who earn a grade point average of 3.4 or higher for a quarter in which they complete 12 or more units of traditionally graded course work and who rank in the upper five percent of students in academic achievement in their school. The preceding eligibility criteria also applies to graduate students seeking a second baccalaureate degree.

Honors at Entrance: Freshmen who enter with grade point averages of 3.5 or higher on their high school records.

Alumni Association Certificates: Undergraduate and graduate students who are selected by their academic departments for outstanding achievement in their fields of study. At least a 3.0 average and three quarters of attendance at the University are required.

Graduation with Honors

Baccalaureate graduates of the University who maintain outstanding records of scholarship while earning their degrees are accorded special recognition upon graduation. These honors, designated on the diploma, are granted to the top five percent of students graduating in each school, calculated from grade point averages achieved at the University. Eligibility is limited to students who have earned at least 72 quarter units in residence. Graduation with high honor is awarded to the top two percent of those eligible, provided they have a grade point average of at least 3.6. The next three percent are graduated with honor, provided they have a grade point average of at least 3.0.

Departmental Honors Programs

Further recognition of academic excellence is accorded through the University's departmental honors programs, offered presently in the Departments of Anthropology, Chemistry, and Physics, with other programs expected to be added. Students who demonstrate ability to maintain a superior grade point average and have faculty recommendation are permitted to enroll in an honors program in their elected major.

Considerable freedom is provided students and their advisers in designing enriched programs of study. This may include deviations from traditional course patterns to permit additional work in subjects related to the major, more intensive study in subject areas of special interest, participation in special colloquia, independent study, individual research, and honors theses.

Students completing these honors programs receive citations of departmental honors on their transcripts and diplomas.

National Honor Societies

In addition to Phi Kappa Phi, the national honor society which recognizes outstanding scholarship in all academic fields, there are chapters of more than twenty national honor societies which accord recognition to students who demonstrate superior scholarship and leadership in specific academic fields.

SCHOOL AND DEPARTMENTAL OFFICES

**For calls from off campus, dial the 224 prefix, then the 4-digit extension number.*

SCHOOL OF BUSINESS AND ECONOMICS	LOCATION	*PHONE
Donald G. Malcolm, <i>Dean of the School</i>	ST F124	3876
Edward A. Nelson, <i>Associate Dean, Academic Affairs</i>	ST F119	3876
Samuel H. Jopling, <i>Associate Dean, Fiscal Affairs</i>	ST F118	3876
Laird B. Allison, <i>Associate Dean, Operations</i>	SH C160	2727
Undergraduate Advisement Center	SH C144	3652

Department Offices and Chairpersons

Accounting/Business Information Systems, <i>E. Kennedy Cobb</i>	ST F517	3887
Business Education, <i>Ralph Spanswick</i>	ST F517	3887
Economics and Statistics, <i>Donald A. Moore</i>	ST F917	3884
Finance and Law, <i>John Cox (Acting)</i>	ST F717	3881
Management, <i>Emanuel Salemi</i>	ST F717	3881
Marketing and Transportation, <i>Marshall Reddick</i>	ST F917	3884
Bureau of Business and Economic Research	ST F817	2895
John M. Hemphill, <i>Director</i>	ST F116	3876
Los Angeles Business and Economics Magazine	ST F817	2895
Continuing Education and Business Programs	ST F826	2894
Bernard Codner, <i>Director of Business Programs</i>	ST F115	3876

SCHOOL OF ENGINEERING	LOCATION	*PHONE
Leslie Cromwell, <i>Dean of the School</i>	E&IS A205	3541
Martin S. Roden, <i>Associate Dean</i>	E&IS A238	2438
Engineering Advisement Center	E&IS A242	3235

Department Offices and Chairpersons	LOCATION	*PHONE
Civil Engineering, <i>Anjan K. Bhaumik</i>	E&IS A211	2520
Electrical Engineering, <i>Roger D. Brandt</i>	E&IS A234	3552
Mechanical Engineering, <i>Phillip I. Gold</i>	E&IS A222	2479
Interdisciplinary Engineering, <i>Alfred H. Fritz (Acting)</i>	E&IS A234	3550

SCHOOL OF FINE AND APPLIED ARTS	LOCATION	*PHONE
Donald G. Mortensen, <i>Dean of the School</i>	FA 134	3587
Ben C. Gmur, <i>Associate Dean, Instructional Services</i>	FA 133	2766
Audrey G. Gieseking, <i>Associate Dean, Instructional Planning and Research</i>	FA 130	3433

Department Offices and Chairpersons	LOCATION	*PHONE
Art, <i>Theodore Little</i>	FA 332	3521
Criminal Justice, <i>G. Douglas Gourley</i>	KH D1045	3713
Health and Safety Studies, <i>Ben F. Scherer</i>	E&IS A317	3356
Home Economics, <i>Margaret McWilliams</i>	FA 238	3682
Industrial Studies, <i>Kenneth Phillips</i>	E&IS A336	3221
Music, <i>Charles M. Hubbard</i>	Mus 145	3448
Nursing, <i>Ruth Wu</i>	ST F417	3421
Physical Education and Athletics, <i>William E. Wilgus</i>	PE 206	3216

**For calls from off campus, dial the 224 prefix, then the 4-digit extension number.*

Interdepartmental Programs and Coordinators		
Child Development, <i>Ann M. Bingham-Newman</i>	E&IS A420	3297
Recreation, <i>James G. Dunkelberg</i>	PE 104	3351

SCHOOL OF LETTERS AND SCIENCE	LOCATION	*PHONE
Donald O. Dewey, <i>Dean of the School</i>	KH D1052	3726
Howard P. Holladay, <i>Associate Dean, Instruction</i>	KH D1050	2541
Paul K. Rowan, <i>Associate Dean, Academic Resources</i>	KH D1051	3825

Department Offices and Chairpersons	LOCATION	*PHONE
Anthropology, <i>Richard L. Stone</i>	KH C4068	2571
Biology, <i>Dudley W. Thomas</i>	Bio Sc 140a	3258
Chemistry, <i>Harold Goldwhite</i>	Phys Sc 613	3613
Chicano Studies, <i>Hector Soto-Perez (Acting)</i>	ST F617	2544
English, <i>Sidney Richman</i>	E&IS A605	3722
Foreign Languages and Literatures, <i>Abdallah Beddawi</i>	KH D1054	3716
Geography, <i>William Byron</i>	KH C4067	3822
Geology, <i>Alan Colville</i>	Phys Sc 218	3388
History, <i>Neil Rabitoy</i>	KH C4066	3843
Journalism, <i>Robert E. Blackmon</i>	KH C3101	3626
Mathematics, <i>Charles L. Clark</i>	ST F207	3287
Microbiology and Public Health, <i>Kenneth Anderson</i>	Bio Sc 140	3531
Pan-African Studies, <i>S. O. Akalonu</i>	KH C3095	2531
Philosophy, <i>Donald R. Burrill</i>	Mus 202	3477
Physics, <i>Demetrius Margaziotis</i>	Phys Sc 315	3607
Political Sciene, <i>Edward M. Goldberg</i>	E&IS A523	2891
Psychology, <i>Jerry Tate</i>	KH C3103	3841
Sociology, <i>Marion Dearman</i>	KH C3093	3837
Speech Communication and Drama, <i>Beverly Hendricks</i>	Mus 104	3457

Interdepartmental Programs and Coordinators		
American Studies, <i>Charles E. Beckwith</i>	KH C4073A	2787
Comparative Literature (in Department of Foreign Languages)	KH D1054	3716
Latin American Studies, <i>Louis DeArmond</i>	Lib B552	2878
Liberal Studies, <i>W. Keith Henning</i>	KH C4069	3182
Social Science (in Department of Political Science)	E&IS A533	2564
Urban Studies (in Department of Geography)	KH C4067	3822

American Studies

In the School of Letters and Science

The American Studies programs encompass courses in the arts, humanities, and social sciences, in order to develop a broad understanding of American society. Through interdisciplinary courses in American Studies, particular aspects of American culture are examined in comparative ways.

The Bachelor of Arts degree described below offers preparation for a variety of career choices in which specific career preparation is less important than a humanistic and comprehensive education. Preparation for teaching may be incorporated into the major. Alternatively, a major in American Studies may be combined with a minor in another field.

The Master of Arts degree program is described in the *Graduate Programs* section.

The Faculty

The American Studies faculty is drawn from the Schools of Business and Economics, Education, Fine and Applied Arts, and Letters and Science, with Charles E. Beckwith, Professor of English, serving as Coordinator.

The Undergraduate Program

Sixty-four units of upper division courses are required, including 20 units in American Studies, 32 units of liberal arts courses selected from four fields, and 12 units of additional elective courses.

No lower division courses are required. Students follow the General Education program and add, as electives, courses in American language and literature, philosophy, fine arts, and social studies, including American origins in western civilization.

An alternative program is offered to meet requirements for the multiple subjects teaching credential. Students should consult the American Studies Office for details of this program.

Requirements for the Major

The 64-unit requirement for the major is distributed as follows:

Required in American Studies (16 units):

- 401 Study of American Culture (4)
- 402 Ideas in America (4)
- 403 American Popular Culture (4)
- 404 Avant-Garde in American Life (4)

Elective in American Studies (4 units):

Select *one* from the following:

- 350 America in Great Books (4)
- 354 Mini-Topics in American Studies (1-6)
- 405 Folklore in American Culture (4)
- 490 Selected Topics in American Studies (4)

Electives in Liberal Arts (32 units):

Select at least *two* courses from each of fields I-IV below with approval of adviser.

I. American Language and Literature

(a) Select at least *one* from following:

- English 401, 471, 472, 473, 475

Journalism 400

Speech Communication 473A, 473B

(b) Select at least *one* from following:

English 405, 430, 475, 491

Speech Communication 454

II. American Arts and Philosophy

(a) Select at least *one* from following for 3-4 units:

Art 426, 441

Music 450, 451, 452

Pan-African Studies 421

Philosophy 430

(b) Select at least *one* from following:

Philosophy 430, 440

III. Social Sciences in America

(a) Select at least *one* from following for 4-6 units:

Chicano Studies 410A, 444

Economics 301, 302, 303, 350

Geography 421

History 470, 471, 472, 477A, 477B, 479, 480, 483, 484

Pan-African Studies 410

Political Science 404, 413, 415, 418

Sociology 424, 426, 430, 434

(b) Select at least *one* from following:

Chicano Studies 430, 470A

Economics 390, 406, 433, 440, 490

History 474, 475, 476, 477C, 478, 481, 482

Pan-African Studies 420

Political Science 305, 414, 419, 442

Sociology 445, 448, 460, 478

IV. American Origins in Western Civilization

(a) Select at least *one* from following for 3-4 units.

Art 421

Drama 311, 312, 313

English 463, 464, 465, 467, 468, 480, 481

History 423, 424, 441, 442, 443

Speech Communication 472

(b) Select at least *one* from following:

English 402, 446, 447, 482, 484, 485, 486

Geography 423

History 411, 412, 422, 425, 426, 427, 428, 429, 438, 440

Political Science 410, 411, 430, 444

Additional Electives (12 units):

Select from any of required fields above with approval of adviser.

The Credential Program

The Bachelor of Arts degree program in American Studies with a multiple subjects credential option is intended for examination waiver for the multiple subjects credential. For detailed information on this credential option students should consult advisers in American Studies and in the School of Education.

Courses of Instruction

Upper Division Courses

350 America in Great Books (4)

Prerequisite: Completion of lower division General Education requirements in social sciences, humanities, and communication. Study of selected books in humanities and social sciences which, besides being outstanding in their respective fields, have influenced the character of American society.

354 Mini-Topics in American Studies (1-6)

Short-term variable-content course on topics of special interest. Unit credit will vary according to subject. May be repeated to maximum of 8 units.

401 Study of American Culture (4)

Interdisciplinary study of American culture: materials, methods, and problems in study of a civilization in comprehensive terms.

402 Ideas in America (4)

Significant social, political, economic, religious, and philosophic concepts reflected in representative statements, ranging from historical documents to imaginative literature.

403 American Popular Culture (4)

Philosophical, psychological, esthetic, and social implications in mode and meaning of representative American mass media.

404 Avant-Garde in American Life (4)

Examination of a number of movements on frontiers of American intellectual life.

405 Folklore in American Culture (4)

Prerequisite: Completion of lower division General Education requirements. Types and forms of American folklore and their significance for American society.

490 Selected Topics in American Studies (4)

Prerequisites: American Studies 401 and one other course in American Studies, or consent of instructor. Intensive study of selected topics in American culture; subjects vary. May be repeated to maximum of 8 units.

499 Undergraduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor and approval of coordinator. Project selected in conference with sponsor before registration, progress meetings held regularly and final report submitted. May be repeated for credit. May not be used in graduate programs in American Studies.

Anthropology

In School of Letters and Science

The Department of Anthropology offers a wide range of study in world cultures, including courses which support programs in the social, behavioral, and life sciences. The Bachelor of Arts degree program is described below. The Master of Arts program is described in the *Graduate Programs* section.

The Faculty

Professors: Hal Eberhart, Robert H. Ewald, Arthur Niehoff, Fred M. Reinman.

Associate Professors: Catherine Martin, Richard L. Stone (Chairperson), Jeannette Witucki, Mary F. Woodward.

Assistant Professors: Anne Fleuret, M. Diane Kagan, Norman Klein, Jon Olson, Elliot Oring.

The Undergraduate Program

The Bachelor of Arts degree in Anthropology is available in two options, the first for those who seek a liberal arts education or who wish to prepare for advanced study and research (General Option), and a second which will prepare students for a California teaching credential in the social sciences.

Departmental Honors Program

The Department of Anthropology offers an Honors Program for students who have completed at least 16 upper division units in Anthropology with a minimum grade point average of 3.25 in all Anthropology courses, and who possess a minimum grade point average of 3.0 in all college work. Admission to the program is by written petition.

The program is designed to introduce superior students to intensive research experience in Anthropology and related fields, as well as to more sophisticated and thorough study of anthropological theory in relevant sub-areas of the discipline. Honors students are permitted to depart from the normal major program in various ways so as to broaden and enrich their curriculum.

Honors students plan their programs in consultation with an honors adviser. Students enroll during each of their final three quarters in Anthropology 396, and submit a written thesis to the departmental honors committee. Diplomas and transcripts of honors program graduates are designated: "*Graduated with Department Honors in Anthropology.*"

Requirements for the Major

The General Option requires 56 units in Anthropology, of which 10 are in lower division and 46 are in upper division courses. The option for the Single Subject Credential in Social Science

requires 84 units, of which 10 are in lower division, 38 in upper division Anthropology courses, and 36 are in related social science courses. In addition, students must include 12 units of a modern foreign language in their lower division programs or offer successful completion of three years of modern language study in high school as an acceptable equivalent.

General Option

Lower Division

Required in Anthropology (10 units):

250 Cultural Anthropology (6)

260 Physical Anthropology (4)

Upper Division

Required in Anthropology (8 units):

430 Social Organization (4)

497 History of Ethnological Theory (4)

Electives in Anthropology (30 units):

Select *one* from following:

Anthropology 431, 433, 437, 439, 440

Select *two* from following:

Anthropology 401, 403, 404, 406, 407, 408, 410, 413, 414

Select *one* from following:

Anthropology 470 or 471

Select *one* from following:

Anthropology 421, 423, 425

Select *one* from following:

Anthropology 435, 444, 445, 462

Select *one* from following:

Anthropology 424, 464, 480

Additional Electives:

Select courses in Anthropology to complete upper division minimum of 46 units. Beyond this minimum, students are encouraged to add elective courses from other disciplines, in consultation with major advisers.

Option for Single Subject Credential in Social Science

Lower Division

Required in Anthropology (10 units):

- 250 Cultural Anthropology (6)
- 260 Physical Anthropology (4)

Upper Division

Required in Anthropology (12 units):

- 430 Social Organization (4)
- 443 Anthropology and Education (4)
- 461 Human Variation (4)

Electives in Anthropology (26 units):

Select *two* from following:

- 403, 404, 406, 407, 408, 410, 413

Select *one* from following:

- 421, 423, 425

Select *one* from following:

- 431, 433, 437, 439, 497

Select *one* from following:

- 424, 464, 480

Select *one* from following:

- 435, 470

Required in Related Fields (20 units):

- Chicano Studies 444
- History 101ABC
- Pan-African Studies 420

Electives in Related Fields (16 units):

Select from following with approval of adviser.

- American Studies 401, 402
- Geography 421, 431, 441
- History 102C, 102D, 102E, 150

Or any upper division history course

- Pan-African Studies 251AB
- Political Science 305, 421
- Psychology 150, 412AB, 420, 422
- Sociology 250, 420, 426, 430

Minor in Anthropology

A minor in Anthropology is available for students majoring in other fields. A total of 30 units in Anthropology, of which 10 units are in lower division courses and 20 units are in upper division courses, is required.

Lower Division

Required in Anthropology (10 units):

- 250 Cultural Anthropology (6)
- 260 Physical Anthropology (4)

Upper Division

Electives in Anthropology (20 units):

Select *one* from following:

- Anthropology 430, 433, 497

Select *two* from following:

- Anthropology 401, 403, 404, 406, 407, 408, 410, 413, 414, 421, 425

Select *two* from following:

- Anthropology 431, 435, 437, 439, 440, 443, 444, 445, 460, 461, 462, 470, 471, 490

The Credential Program

The Bachelor of Arts degree program in Anthropology has been approved by the Commission for Teacher Preparation and Licensing for examination waiver for the single subject credential in Social Sciences. Students should consult advisers in the department and in the School of Education.

Courses of Instruction

Lower Division Courses

250 Cultural Anthropology (6)

Exploration of concept of culture, evolution of cultural systems, application of concept of culture to selected anthropological problems, relevance of concept of culture to modern life.

260 Physical Anthropology (4)

Origin and antiquity of the human species and their place in nature, fossil evidence for human evolution, varieties of humans, somatological and genetic bases for racial classifications.

270 Introduction to Archeology (4)

Introduction to world prehistory, examination of basic archeological concepts, investigation of extinct cultures.

Upper Division Courses

354 Special Topics in Anthropology (1-4)

Prerequisites: As needed for specific topic. Topics of special interest in anthropology, as announced in *Schedule of Classes*. May be repeated for credit as subject matter changes.

396 Honors Thesis (1-3)

Prerequisite: Open only to students who have been admitted to Honors Program in Anthropology. Preparation of an honors thesis, under supervision of an adviser, acceptable to departmental honors committee. May be repeated to maximum of 6 units.

401 Cultures of the World (4)

Prerequisite: Anthropology 250 or consent of instructor. Principal culture types and their geographical distribution, application of cultural data to ethnological problems.

403 Black Cultures of New World (4)

Prerequisite: Anthropology 250 or consent of instructor. Cultural anthropological study of black people in selected societies of the New World. Focus upon implications of slavery on black American, Caribbean, and Brazilian cultures.

404 Peoples of South America (4)

Prerequisite: Anthropology 250 or consent of instructor. Prehistoric, historic and contemporary cultures of South America, with emphasis on sociological and ethnological principles of analysis and comparison.

406 Indians of North America (4)

Prerequisite: Anthropology 250 or consent of instructor. Native peoples of North America north of Mexico, their origins, culture change after contact with Europeans.

407 Indians of California (4)

Prerequisite: Anthropology 250 or consent of instructor. Native peoples of California, their origins, languages, and cultures.

408 Peasant Cultures of Middle America (4)

Prerequisite: Anthropology 250 or consent of instructor. Pre-Spanish civilizations of Mexico and Central America, the conquest and colonial backgrounds of present-day peoples, contemporary societies and cultures of area.

410 Peoples of the Pacific (4)

Prerequisite: Anthropology 250 or consent of instructor. Island peoples of Polynesia, Melanesia, and Micronesia, migration theories, contemporary social and political systems, European contacts and culture change.

413 Peoples of Africa (4)

Prerequisite: Anthropology 250, or consent of instructor. Historical and cultural backgrounds of traditional and contemporary societies of Africa south of the Sahara, Western and Asian influences, problems of social, economic, and political development.

414 Peoples of Asia (4)

Prerequisite: Anthropology 250 or consent of instructor. Peoples and cultures of Asia; interrelationships of contemporary groups and dynamics of culture change. Emphasis alternates among four areas: Japan and Korea; South Asia; Southeast Asia; China. May be repeated until all areas of emphasis are covered.

421 Archeology of North America (4)

Prerequisite: Anthropology 250 or consent of instructor. Early peopling of North America and development of prehistoric cultures in New World north of Mexican high culture area.

423 Primitive Technology (4)

Prerequisite: Anthropology 250 or consent of instructor. Investigation of role of technology in early human culture, materials and use of tools during human evolution, techniques of manufacture, and influence of early technology in culture.

424 Archeological Research Techniques (6)

Prerequisites: Anthropology 270 or 407 or 421 and consent of instructor. Instruction in recovery and interpretation of archeological data. Lecture 4 hours, laboratory and field work 6 hours.

425 Archeology of the Old World (4)

Prerequisite: Anthropology 250 or consent of instructor. Growth of culture from its earliest beginnings to emergence of great civilizations, utilizing concepts, methods, and data of archeology.

430 Social Organization (4)

Prerequisites: Anthropology 250 or 401 or Sociology 414 or 444 and consent of instructor. Systems of kinship and marriage, with reference to social control, religion, law, politics, and economic organization.

431 Economic Anthropology (4)

Prerequisite: Anthropology 250 or consent of instructor. Economic dimensions of non-literate, pre-industrial societies; survey of historical and contemporary theories in economic anthropology; comparison of economies of societies ranging from bands through contemporary peasantry.

433 Culture Change (4)

Prerequisite: Anthropology 250 or consent of instructor. Examination of culture change, critical evaluation of selected studies; review of various theoretical positions, their contributions to and limitations for a general theory of culture change.

435 Psychological Anthropology (4)

Prerequisite: Anthropology 250 or consent of instructor. Personality development in cultural milieu; role concept, modal personality, cognition, and other concepts examined in relation to individual variation in culture.

437 Anthropology of Religion (4)

Prerequisite: Anthropology 250 or consent of instructor. Religion in relation to other parts of culture; a cross-cultural analysis of the role and functions of religion as a universal, but diverse, ingredient in human society.

439 Anthropology of Political Systems (4)

Prerequisite: Anthropology 250 or consent of instructor. Ethnological study of political organization, from non-state to state systems, in pre-industrial societies.

440 Applied Anthropology (4)

Prerequisites: Anthropology 250 and 433, or consent of instructor; Biology 151 recommended. Application of anthropological concepts and data to problems in modern life.

443 Anthropology and Education (4)

(Also listed as *Educational Foundations 443*)

Prerequisite: Anthropology 250 or consent of instructor. Education in cross-cultural perspective; application of anthropological concepts and knowledge to understanding of educative process.

444 Medical Anthropology (4)

Prerequisite: Anthropology 250, or Sociology 201, 202, or 250, or consent of instructor. Medical practice within socio-cultural perspective. Application of anthropological concepts and knowledge to an understanding of health, illness and curing.

445 Anthropological Folklore (4)

Prerequisite: Anthropology 250, or American Studies 405, or consent of instructor. Theories and techniques relevant to study of folklore in cultural context; analysis of basic elements of folklore structure, composition, transmission, function and performance.

460 Human Evolution (4)

Prerequisite: Anthropology 260 or consent of instructor; Biology 151 recommended. Critical examination of fossil evidence for human evolution considering importance of cultural evolution. Emphasizes recent discoveries and controversial theories surrounding them.

461 Human Variation (4)

Prerequisite: Anthropology 260 or consent of instructor; Biology 151 recommended. Evaluation of culture and environmental influences upon composition and distribution of human populations. Consideration of genetic basis for human variation and biological validity of race concept.

462 Ecological Anthropology (4)

Prerequisite: Anthropology 260 or consent of instructor; Biology 151 recommended. Study of man's ecology in terms of available data and current theories. Derivation of a theoretical approach to human ecology, combining anthropological and non-anthropological approaches.

464 Methods and Techniques of Physical Anthropology (6)

Prerequisites: Anthropology 260 and consent of instructor. Methods of data gathering and analysis in physical anthropology, including consideration of practical problems in field research and advantages and limitations of various field and laboratory techniques. Lecture 4 hours, laboratory 6 hours.

470 Language and Culture (4)

(Also listed as English 403)

Prerequisite: Anthropology 250 or consent of instructor. Role of language in development of cultural patterns, including relationships between change in language and change in culture; analysis of language as matrix of culture.

471 Introduction to Linguistics (4)

(Also listed as English 400)

Prerequisite: Upper division standing. Descriptive and historical study of language; problems of data collection and techniques of analysis, linguistic structure, language classification, language families of the world, language in its socio-cultural setting.

472 Linguistic Analysis (4)

Prerequisite: Anthropology 471 (may be taken concurrently) or consent of instructor; 250 recommended. A problems course in anthropological techniques of phonemic and morphemic analysis; close reading of technical, descriptive literature; survey of phonological and grammatical systems of non-Indo-European languages.

480 Anthropological Methods and Techniques (6)

Prerequisites: Anthropology 250 and consent of instructor. Introduction to methodology of anthropological research, including methods of ethnographic investigation, ethnological analysis, and logical processes of problem solving. Lecture 4 hours, laboratory and field work 6 hours.

490 Anthropology Proseminar (4)

Prerequisite: Twelve units upper division in Anthropology or consent of instructor. Seminar in theory, research methods, and objectives, designed to help prepare student for graduate work. Recommended for all Anthropology majors. May be repeated once for credit.

497 History of Ethnological Theory (4)

Prerequisites: Senior or graduate standing and 16 units of anthropology and/or sociology, as approved by instructor. Historical survey and analysis of major schools of anthropological thought.

499 Undergraduate Directed Study (1-4)

Prerequisite: Consent of instructor to act as sponsor. Project selected in conference with sponsor before registration; progress meetings held regularly, and final report submitted. May be repeated to maximum of 6 units.

Art

In School of Fine and Applied Arts

The programs of the Department of Art offer students the opportunity to develop their talents in working in a variety of art techniques and art forms and to specialize in the field or fields which interest them most. Included in the program are work in design, painting, ceramics, sculpture, metals, and textiles, as well as study of art history and theory. The Bachelor of Arts program is described below. The graduate program leading to the M.A. in Art is described in the *Graduate Programs* section.

The Faculty

Professors: Walter M. Askin, Charles E. Borman, John P. Cornish, Wachtang Djobadze, Leonard Edmondson, Robert R. Fiedler, Leonard F. Heath, Virginia Hoffman, Theodore W. Little (Chairperson), J. M. Metcalf, Ronald H. Silverman, Lydia M. Takeshita, Joseph G. Uribe, Lee J. Wexler, Frank W. Williams.

Associate Professors: Doris L. Barclay, Catherine P. Fels, Edward Forde, Josine Ianco-Starrels, Malcolm W. MacDonald, Gray Phillips, Robert Reeser, Carolyn E. Rosser, Beverly Jeanne Schnitzler, Roy H. Walden, Wanda Westcoast, Kenneth Wynsma.

Assistant Professors: Marilyn Buccellati, Geraldine Dimondstein, Armand F. Fiori, Shiro Ikegawa, Jay C. Maddox, Malcolm McClain, Arlene J. Quint, Piet F. Schellin, Joseph E. Soldate, Vance Studley.

Exhibitions of Work

The Department of Art schedules exhibits in its galleries of work by established professional artists, as well as work by students and faculty. The department reserves the right to retain student work for one year for this purpose.

The Undergraduate Program

The program for the Bachelor of Arts degree in Art is so structured that students have the opportunity to acquire an understanding of the variety of subjects encompassed within the visual arts as well as to develop excellence in a specific area.

Requirements for the Major

All students majoring in Art participate in an exploratory and fundamental core program of 32 quarter units of lower division and 16 units of upper division courses.

Completion of lower division core courses or their equivalent and achievement of upper division standing are prerequisite to admission to upper division Art courses. Students not majoring or minoring in Art must have consent of the instructor.

To complete the remaining 30 of the 78 units required for the major in Art, students select one of the five option programs, in consultation with an adviser.

Credit for Art 499, if taken, is limited to 9 units, 3 units in any one quarter. Nine units may be

used for electives; only 3 units may be used to apply toward the option.

Required Core Program

Lower Division

Required Courses (26 units):

In Art:

- 103 Design I (3)
- 104 Introduction to Drawing (3)
- 106 Survey of Western Art I (4)
- 111 Survey of Western Art II (4)
- 203 Design II (3)
- 234 Introduction to Painting (3)
- 244 Introduction to Life Drawing (3)

In Industrial Studies:

- 280 Tools for the Artist (3)

Electives in Art (6 units):

Select two from the following:

- 102 Introduction to Clay and Ceramic Processes (3)
- 202 Introduction to Textiles, Weaving (3)
- 207 Introduction to Metals, Enamels (3)

Upper Division

Required in Art (12 units):

- 303 Theories of Applied Design (3)
- 309 Sculpture: Basic Approaches (3)
- 401A Proseminar: Critical Theories in the Visual Arts (3)
- 426 Twentieth Century Art (3)

Elective in Related Fields (4 units):

Select one from following with approval of adviser:
Students electing Option V below must take Art 415.

In Anthropology:

- 401 Cultures of the World (4)
- 435 Psychological Anthropology (4)

In Art:

415 Foundations of Art (4)

In English:

480 Literature and the Fine Arts, B.C. (4)

481 Literature and the Fine Arts, A.D. (4)

In History:

437 Social History of Europe (4)

439 Intellectual History of Europe (4)

In Philosophy:

475 Aesthetics (4)

In Sociology:

424 Mass Communications and Public Opinion (4)

Option Programs

Students elect one of the following options to complete their major. Prerequisite to admission to an option is upper division standing and completion of the core. Students within 6 units of completing core requirements may take courses within their option area with departmental permission.

Option I: Art History

The Art History option covers historical and developmental study of art in most of the world's civilizations. It is intended to develop ability to evaluate and comprehend concepts and issues within this cultural heritage. A total of 30 units is required, distributed in the following pattern:

Required in Art (24 units):

Select from following:

406 Ancient Near-Eastern Art and Archeology (4)

411 Greek and Roman Art (4)

416 Medieval Art (4)

421 Baroque Art (4)

431 Oriental Art (4)

436 Renaissance Art (4)

441 American Art (4)

446 Art of Latin America (4)

451 Mannerism: High Renaissance to Baroque (4)

461 Oceanic and North American Indian Art (4)

466 Nineteenth Century Art (4)

471 History of Costume I (4)

481 African Art (4)

486 History of Costume II (4)

Electives in Art (6 units):

Select upper division courses with approval of adviser.

Option II: Painting, Sculpture and Graphic Arts

The Painting, Sculpture and Graphic Arts option is planned for the development of perceptual and conceptual abilities needed for engaging in creative visual expression. A total of 30 units is required, distributed in the following pattern:

Required in Art (24 units):

Select from following:

314 Sculpture: Plaster and Stone (3)

319 Sculpture: Wood (3)

409 Sculpture: Clay Modeling (3)

414 Advanced Painting and Drawing (3)

419 Sculpture: Metal (3)

424 Printmaking (L) (3)

464 Life Composition (3)

474 Printmaking (E) (3)

479 Serigraphy and Relief Printing (3)

484 Advanced Sculpture (3)

Electives in Art (6 units):

Select upper division courses with approval of adviser.

Option III: Design

The Design option is planned to develop an understanding of design theory necessary for production of ideas in graphic design, environmental design and costume design. A total of 30 units is required, distributed in the following pattern:

Required in Art (24 units):

Select from following:

313 Lettering I (3)

323 Perspective Drawing (3)

403 Three-Dimensional Design (3)

408 Graphic Communication (3)

413 Lettering II (3)

423 Product Design (3)

432 Textiles (3)

433 Color (3)

443 Architectural Design (3)

448 Exhibition Design (3)

463 Portfolio Presentation (3)

471 History of Costume I (3)

473 Costume Design (3)

478 Fashion Illustration (3)

483 Interior Design (3)

488 Illustration (3)

493 Commercial Graphics (3)

Electives in Art (6 units):

Select upper division courses with approval of adviser.

Option IV: Ceramics, Metals and Textiles

The Ceramics, Metals and Textiles option is planned to explore the theoretical and practical implications underlying the development of crafts. A total of 30 units is required, distributed in the following pattern:

Required in Art (24 units):

Select from following:

307 Ceramics (3)

323 Perspective Drawing (3)

372 Jewelry (3)

412 Advanced Ceramics (3)

422 Advanced Research in Craft Materials and Processes (3)

432 Textiles (3)

447 Weaving (3)

462 Metal Forging (3)

472 Enameling (3)

482 Metal Raising (3)

Electives in Art (6 units):

Select upper division courses with approval of adviser.

Option V: The Credential Program

The Credential Program is planned for art majors who are also candidates for the single subject teaching credential. It is designed to acquaint students with concepts and processes associated with the visual arts as identified by the California

Commission for Teacher Preparation and Licensing. Students electing this option should seek advisement from both the Art Department and the School of Education.

Required as part of core program:

415 Foundations of Art (4)

Required in Art (12 units):

400 Development of Literacy in Visual Arts (4)

405 Exploring Art Concepts and Media (4)

460 Multi-cultural Approaches to Visual Arts (4)

Electives in Art (18 units):

Select courses from one of the four preceding options.

Minor in Art

A minor in Art is available for students majoring in other fields. Forty-one quarter units in art courses are required.

Lower Division

Required in Art (12 units):

102 Introduction to Clay and Ceramic Processes (3)

103 Design I (3)

104 Introduction to Drawing (3)

234 Introduction to Painting (3)

Elective in Art (4 units):

106 Survey of Western Art I (4)

or

111 Survey of Western Art II (4)

Upper Division

Required in Art (10 units):

309 Sculpture: Basic Approaches (3)

415 Foundations of Art (4)

426 Twentieth Century Art (3)

Electives in Art (15 units):

Select courses from two of the Art major option programs.

The Credential Program

The B.A. degree program in Art has been approved by the Commission for Teacher Preparation and Licensing for examination waiver, for the single subject credential in Art. Students interested in this program should refer to Option V above, and should consult advisers in both the Art Department and the School of Education.

Courses of Instruction

Lower Division Courses

102 Introduction to Clay and Ceramic Processes (3)

Orientation to ceramic processes; hand-building techniques for pottery, modeling and sculpture; experimentation with surface treatment, use of engobes and glaze application. Activity 6 hours.

103 Design I (3)

Introductory studies of elements and principles of art in two-dimensional design theory. Activity 6 hours.

104 Introduction to Drawing (3)

Drawing experiences involving development of form, structure, light and dark, and relationships of visual structural elements. Activity 6 hours.

106 Survey of Western Art I (4)

Survey of historical development of painting, sculpture, and architecture from Paleolithic period to end of the Middle Ages.

111 Survey of Western Art II (4)

Survey of historical development of painting, sculpture, and architecture from Giotto (1300) to present.

151 Introduction to Art (3)

Appreciation and understanding of visual arts. Sociology, psychology, communication, and esthetics of drawing, painting, sculpture, crafts, industrial design, architecture, photography, and motion pictures.

200 Exploring the Arts in Early Childhood (4)

Integrated approach to concepts in visual arts as related to dance and music in education of young children. Field trips may be required.

202 Introduction to Textiles and Weaving (3)

Emphasis on design characteristics inherent in fabric design, introductory experiences in silk screen printing, block printing, weaving, stitchery and applique. Activity 6 hours.

203 Design II (3)

Prerequisite: Art 103. Intermediate studies of elements and principles of art with emphasis on three-dimensional design theory. Activity 6 hours.

207 Introduction to Metals and Enamels (3)

Exploration of characteristics of metals and enamels; introduction to basic tools, techniques and processes; emphasis on design possibilities inherent in non-solder joining, texturing, forging and application of enamels. Activity 6 hours.

234 Introduction to Painting (3)

Prerequisite: Art 104. Creative use of color based on an understanding of visual structural elements; study and manipulation of various media including watercolor and oil. Activity 6 hours.

244 Introduction to Life Drawing (3)

Prerequisite: Art 104. Basic concepts of figure drawing; experimentation leading toward understanding of form, structure, and proportions of human figure as applied to visual expression. Activity 6 hours.

Upper Division Courses

Upper division standing is prerequisite to enrollment in all upper division Art courses. Students majoring or minoring in Art must have completed applicable lower division core courses or equivalents; students in other fields must have consent of instructor.

303 Theories of Applied Design (3)

Prerequisite: Art 203. Two- and three-dimensional design as applied to historic and contemporary design theory. Activity 6 hours.

307 Ceramics (3)

Introduction to clay and clay technology; foundation course with laboratory practice in hand construction processes, decorative processes, and experimental research. Activity 6 hours.

309 Sculpture: Basic Approaches (3)

Introductory experiences in three principal sculptural approaches of modeling, carving and construction; physical characteristics of various materials used in sculpture and esthetic concepts involved in basic approaches. Activity 6 hours.

313 Lettering I (3)

Theoretical and historical background of lettering. Development of basic skills in beginning lettering and calligraphic techniques. Activity 6 hours.

314 Sculpture: Plaster and Stone (3)

Basic sculptural experiences and use of sculpture tools; work in stone, plaster, and cement; direct carving and modeling; armature construction. Activity 6 hours.

319 Sculpture: Wood (3)

Basic sculpture concepts and techniques of direct wood carving and construction. Other materials used to supplement use of wood in exploration of contemporary concepts of sculpture. Activity 6 hours.

323 Perspective Drawing (3)

Laboratory course to develop skills in perspective drawing including orthographic projection, isometric drawing, and rendering. Activity 6 hours.

351 Art Appreciation (3)

Development of an understanding of art through its structure, history, and significant works. Attendance at selected galleries required.

372 Jewelry (3)

Prerequisite: Art 323, or consent of instructor for students majoring in other fields. Design and fabrication of jewelry, basic bending, forming and soldering techniques, stone setting. Activity 6 hours. May be repeated to maximum of 6 units.

398 Cooperative Education (1-3)

Prerequisites: An overall grade point average of 2.35, upper division standing in the departmental major or minor, and approval by the departmental coordinator prior to registration. Active employment, with regular meetings to discuss student's progress. May be repeated to maximum of 6 units. Graded CR/NC only.

400 Development of Literacy In Visual Arts (4)

Investigation of perceptual, expressive, historical and cultural components associated with visual-esthetic phenomena. Lectures, studio experience, and visits to art exhibits.

401AB Proseminar: Critical Theories In Visual Arts (3-3)

Prerequisites: Art 106 or 111, and 426; senior standing as Art major or recommendation of department. Systematic approach to art theory, criticism, and evaluation within the visual arts; development of independent critical and artistic viewpoints with regard to creation of art forms.

403 Three Dimensional Design (3)

Prerequisite: Art 303. Design of space modulation and motion; includes work with mobiles, stabiles and other three-dimensional forms. Activity 6 hours. May be repeated to maximum of 6 units.

405 Exploring Art Concepts and Media (4)

Prerequisite: Completion of lower division core requirements for Art major or minor, or consent of instructor. Exploration and analysis of ideas and processes suited to development of expressive and appreciative skills. Lecture 2 hours, activity 4 hours.

406 Ancient Near Eastern Art and Archeology (4)

Art and archeology of ancient Mesopotamia, Egypt, Crete, and Greece. Principal monuments of architecture, sculpture, and the applied arts.

408 Graphic Communication (3)

Prerequisites: Art 313 and 493. Contemporary communication and its historical development; transmission of ideas through visual symbolism. Laboratory and lecture. Activity 6 hours. May be repeated to maximum of 6 units.

409 Sculpture: Clay Modeling (3)

Prerequisite: Art 309. Advanced clay modeling and construction; anatomical studies from model, physical and esthetic properties of clay as a medium of personal expression. Activity 6 hours.

410 Art Experiences for Exceptional Children (3)

Art education concepts relative to requirements of retarded or handicapped children; work in two-dimensional and three-dimensional materials and skills appropriate to individual abilities. Activity 6 hours.

411 Greek and Roman Art (4)

Art of Greece, its development in Hellenistic and Roman times and the Etruscan influences.

412 Advanced Ceramics (3)

Prerequisite: Art 307. Laboratory experience with tools, clays, clay bodies, and techniques fundamental to formation of ceramic ware by means of potter's wheel. Activity 6 hours. May be repeated to maximum of 6 units.

413 Lettering II (3)

Prerequisite: Art 313 or equivalent. Advanced studies and development of skills in use of lettering and calligraphic techniques. Laboratory and lecture. Activity 6 hours.

414 Advanced Painting and Drawing (3)

Prerequisites: Art 234 and 244. Studio approaches to painting techniques and pictorial organization. May be repeated to maximum of 24 units, and to maximum of 9 units with any one instructor. Activity 6 hours.

415 Foundations of Art (4)

Philosophical, historical, cultural, and psychological factors in creation of and response to visual-aesthetic form.

416 Medieval Art (4)

Principal monuments of Medieval architecture, sculpture and painting covering the Celtic, Carolingian, Ottonian, Romanesque, and Gothic periods.

419 Sculpture: Metal (3)

Prerequisite: Art 314 or 319. Lost-wax method of casting non-ferrous metals, welding and brazed sculpture. Activity 6 hours.

420 Methods for Teaching Elementary School Art (3)

Prerequisite: Art 400. Analysis of theories of the visual arts; studio experiences with two- and three-dimensional forms appropriate to elementary school situations. May not be included in any teaching major. Activity 6 hours.

421 Baroque Art (4)

Art of western Europe from 16th through late 17th century.

422 Advanced Research in Craft Materials and Processes (3)

Prerequisite: Six units of upper division craft courses. Opportunity to explore selected materials and processes used in the crafts. Research techniques employed. Lecture and laboratory. Activity 6 hours. May be repeated to maximum of 6 units.

423 Product Design (3)

Prerequisite: Art 323. Manipulation of three-dimensional form relative to functional and merchandising requirements of industrial assignments. Activity 6 hours.

424 Printmaking (L) (3)

Prerequisite: Completion of lower division core requirements or equivalent. Graphic processes of lithography: work in black and white and color. Activity 6 hours. May be repeated to maximum of 6 units.

426 Twentieth Century Art (3)

Art of Western Europe and America from 1900 to present.

430 Art for the Young Child (4)

Prerequisite: Art 200 or equivalent. Exploring visual arts in relation to esthetic, emotional, intellectual, and social growth of young children. Lecture 2 hours, activity 4 hours.

431 Oriental Art (4)

Ancient graphic and plastic arts of China, Japan, India, and Persia. Evaluation of their contribution to art expressions of present day. Offered in two sections: China and Japan considered in one, and India and Persia in the other. May be repeated to maximum of 8 units.

432 Textiles (3)

Design of printed fabrics including use of silk screens, linoleum block prints, stencils, and dyes; emphasis on creative design and experimentation. Activity 6 hours. May be repeated to maximum of 6 units.

433 Color (3)

Interaction of color, studio work in additive and subtractive color, historical and contemporary theories and expressive use of color. Activity 6 hours. May be repeated to maximum of 6 units.

436 Renaissance Art (4)

Art of Europe from 13th through 16th centuries.

440 Basic Craft Materials and Processes (3)

Exploration of meanings and techniques associated with basic handcraft forms. Activity 6 hours.

441 American Art (4)

History of painting, sculpture, architecture, and minor arts of America from coming of white explorers to present.

443 Architectural Design (3)

Problems and solutions inherent in domestic and industrial architectural design. Activity 6 hours. May be repeated to maximum of 6 units.

446 Art of Latin America (4)

Art of Latin America from ancient civilizations to contemporary painting, crafts, and architecture.

447 Weaving (3)

Prerequisite: Completion of lower division art core courses. Introduction to techniques of weaving, design elements involved in weaving fabrics and wallhangings; advanced work includes research and experimentation with traditional threading drafts culminated by creative adaptations. Activity 6 hours. May be repeated to maximum of 9 units.

448 Exhibition Design (3)

Prerequisite: Art 303. Theory and techniques of exhibition and display design; evaluation and analysis of its communicative, esthetic and technical factors through practical application in exhibition areas. Activity 6 hours. May be repeated to maximum of 6 units.

450 Art Education Workshop, Elementary and/or Secondary (4)

Prerequisites: Art 400, 410 or 420, or Secondary Education 421Ar or consent of instructor. Preference to Art majors and minors. Art education techniques applied directly to children and youth in laboratory situation. Lecture 2 hours, laboratory with children, 4 hours. May be repeated to maximum of 8 units.

451 Mannerism: High Renaissance to Baroque (4)

Sixteenth century architecture, painting, sculpture, and minor arts from High Renaissance to Baroque.

454L,P Special Topics in Art (1-4)

Prerequisite: Upper division standing; courses as needed for specific topic. Current topics of special interest, as announced in *Schedule of Classes*. May be repeated to maximum of 9 units.

455 Exploring Nontraditional Media (3)

Prerequisite: Completion of core program. Concepts and methodologies associated with use of nontraditional media for artistic expression: plastics, electronics, film; organizing environmental events. Activity 6 hours.

460 Multi-Cultural Approaches to Visual Arts (4)

Prerequisites: Art 351 or equivalent; Anthropology 250 (may be taken concurrently). Analysis of art experience as human behavior responsive to sociological, ecological, political and historical conditions in American and other cultures. Specially recommended for students preparing for bilingual/cross-cultural specialist credential.

461 Oceanic and North American Indian Art (4)

Historic and traditional art of Pacific areas of Micronesia, Melanesia, Polynesia, and of American Northwest coast and Southwest Indian art.

462 Metal Forging (3)

Prerequisite: Art 323, or consent of instructor for students majoring in other fields. Beginning and advanced techniques of metal forging; development of varied sections; special applications and related techniques. Activity 6 hours. May be repeated to maximum of 6 units.

463 Portfolio Presentation (3)

Research into bookbinding techniques and experiences leading to construction of portfolios; collecting, matting, and evaluation of student work. Preparatory to starting professional art career. Activity 6 hours.

464 Life Composition (3)

Use of human figure in composition, utilizing various media and techniques. Activity 6 hours. May be repeated to maximum of 6 units.

466 Nineteenth Century Art (4)

Art of western Europe from David to end of nineteenth century.

471 History of Costume I (4)

Major periods in western costume from primitive times through 17th century. Evaluation of esthetic, technical, sociological, psychological, and economic factors related to art of dress.

472 Enameling (3)

Prerequisite: Art 207 or consent of instructor. Laboratory experience in basic transparent and opaque enameling techniques; exploration of design possibilities and technological requirements; historical background and

identification of all enamel types. Activity 6 hours. May be repeated to maximum of 6 units.

473 Costume Design (3)

Theories, concepts, techniques, elements and principles of costume design. Activity 6 hours. May be repeated to maximum of 6 units.

474 Printmaking (E) (3)

Graphic processes of etching; work in black and white and color. Activity 6 hours. May be repeated to maximum of 6 units.

476 Early Christian and Byzantine Art (4)

Prerequisite: Art 106 or consent of instructor. Art history from 250 A.D. to 1453 A.D. in Eastern empire and to 476 A.D. in western Roman empire. Covers key monuments of architecture, sculpture, painting, and applied arts.

478 Fashion Illustration (3)

Fashion design, its relation to high style and commercial development of fashion; rendering and production methods. Activity 6 hours. May be repeated to maximum of 6 units.

479 Serigraphy and Relief Printing (3)

History, processes, and production of fine prints using silk screens, wood and contemporary materials; color, black and white printing. Activity 6 hours.

480 School Arts and Crafts Workshop (5)

Prerequisite: Active elementary credential. Problems in elementary school arts and crafts; materials, both two- and three-dimension; techniques, processes, and projects correlating with elementary curriculum. May be repeated to maximum of 10 units.

481 African Art (4)

Art of sub-Saharan Africa. Includes historic art of Benin, Ghana and Kongo kingdoms and traditional art of Western Sudan, Guinea Coast and the Kongo.

482 Metal Raising (3)

Prerequisite: Art 323 or consent of instructor for students majoring in other fields. Beginning and advanced hollow forming and related techniques. Activity 6 hours. May be repeated to maximum of 6 units.

483 Interior Design (3)

Prerequisite: Art 323. Elements of visual expression and design related to contemporary concepts of interior work and living space needs. Activity 6 hours. May be repeated to maximum of 6 units.

484 Advanced Sculpture (3)

Prerequisite: Art 309, 314 or 319. Realization of sculptural form in permanent materials; techniques of stone and wood carving; sculpture with metal and plastic materials. Activity 6 hours. May be repeated to maximum of 6 units.

486 History of Costume II (4)

Western costume of 18th, 19th, and 20th centuries. Evaluation of esthetic, technical, sociological, psychological, and economic factors related to art of dress.

488 Illustration (3)

Prerequisite: Upper division standing; Art majors must have completed lower division core or equivalent; students majoring in other fields must have consent of instructor. Practical and theoretical problems in illustration, utilizing human figure as principal motivational device for dramatization, story line, and composition. Activity 6 hours.

493 Commercial Graphics (1-4)

Studies utilizing a wide variety of media in professional design; emphasis on rendering and illustrative methods. Activity 6 hours.

495 Special Studies in Art (1-4)

Prerequisites: Senior or graduate standing, and 6 units of previously related course work. Intensive study of an area in art. Content of course changes with assigned instructors and their particular expertise; area of special study announced in *Schedule of Classes*. May be repeated to maximum of 9 units.

499 Undergraduate Directed Study (1-3)

Prerequisites: Senior standing, completion of all upper division course work in area of study; consent of an instructor to act as sponsor. Project selected in conference with sponsor before registration; progress meetings held regularly and a final report submitted. Limited to 3 units per quarter. May be repeated to maximum of 9 units.

Asian Studies

No curriculum is offered in Asian Studies. Courses offered in other departments are relevant for those interested in the cultures of Asians and Asian-Americans.

Course of Instruction

The following course is available to Asian-American EOP students only.

100 Introduction to College Environment (4)

Prerequisite: Consent of Educational Opportunity Program. Presentation and discussion of learning techniques, academic skills, and role of Asian-American in contemporary society. Designed primarily to familiarize Asian-American Educational Opportunity Program students with academic community. Graded CR/NC only.

Biology

In School of Letters and Science

The Department of Biology offers programs leading to the Bachelor of Science and Bachelor of Arts degrees in Biology. It also offers the Master of Science degree, which is described in the *Graduate Programs* section.

The Faculty

Professors: Richard K. Allen, Thomas D. Bair, Samuel M. Caplin, Brian Capon, William R. Hanson, Evan K. Oyakawa, Mercer P. Russell, Joseph A. Sacher, Louis W. Stearns, Richard M. Straw, Dudley W. Thomas (Chairperson), Velma J. Vance, Richard J. Vogl.

Associate Professors: Wayne P. Alley, Margaret J. Hartman, James Henrickson, George E. Jakway, Howard Rosen.

Assistant Professors: Roger R. Bowers, Daniel P. Mahoney, Donald A. Martyn, David L. Soltz.

Bachelor of Science Degree

The Bachelor of Science degree in Biology is intended to provide the rigorous training necessary for those wanting to become professional biologists or to pursue graduate work or attend professional schools, while allowing flexibility in the courses taken. The program is available with two options. The General Option is designed to offer students a broad background in biology, whereas the Option in Environmental Biology is intended for students who have particular interests in this aspect of biology.

Requirements for the Major

Of the 198 units required for the Bachelor of Science degree in Biology, the General Option consists of 108–111 units, and the Environmental Biology Option requires 124–126 units. Competence in mathematics through Mathematics 103 is required; this may be met by satisfactory performance on a mathematics placement examination.

It is recommended that students take one year of a foreign language.

General Option

Lower Division

Required Courses (52–53 units):

In Biology:

- 101 Biology of Animals (5)
- 102 Biology of Plants (5)
- 103 Concepts of Biology (3)

In Chemistry:

- 101–103 General Chemistry I, II, III (5-5-5)
- 208ABC Bio-Organic Chemistry I, II, III (4-4-4)

- 301ABC Organic Chemistry (3-3-3)
- and

- 302AB Organic Chemistry Lab (2-2)

Upper Division Credit

In Physics:

- 101–103 Physics (4-4-4)

Upper Division

Required Courses (16 units):

In Biology:

- 302 Biometrics (4)
- 330 Cell Biology (4)
- 415 General Genetics (4)
- 460 General Ecology (4)

Electives (12–14 Units):

Select at least *one* course from each of the following areas:

Anatomy-Morphology

- 423 Comparative Anatomy (5)
- 424 General Embryology (4)
- 425 Plant Anatomy (4)
- 426 Algae (4)
- 427 Fungi (4)
- 428 Morphology of Vascular Plants (4)
- 429 Animal Histology (5)

Systems Physiology

- 430 Plant Physiology I (4)
- 431 Plant Physiology II (4)
- 433 Animal Physiology I (4)
- 434 Animal Physiology II (4)
- 438 Comparative Physiology (5)

Taxonomy-Systematics

- 340A Animal Systematics and Natural History I (4)
- 340B Animal Systematics and Natural History II (4)
- 440 Taxonomy of Angiosperms (4)
- 451 Ornithology (4)
- 452 Ichthyology (4)
- 453 Herpetology (4)
- 455 Mammalogy (4)
- 456 Vertebrate Paleontology (4)
- 457A Marine Invertebrate Zoology I (4)
- 457B Marine Invertebrate Zoology II (4)
- 458 General Entomology (4)

Additional Electives (28 units):

Select upper division courses in Biology, Mathematics, Microbiology, and the physical sciences with approval of adviser.

Option in Environmental Biology**Lower Division**

In addition to completion of the lower division requirements for the Bachelor of Science degree in Biology with the General Option program, the following courses are included in the present option:

Electives (16 units):

Select *four* of the following courses, with no more than two in a single department. Some of these courses may earn General Education credit; those numbered 300 or above earn upper division credit.

Biology 165 Man and Biological Environment (4)

or

Engineering 250 Impact of Technology on Society (4)

Geography 160 Physical Geography (4)

Geography 360 Elements of Meteorology (4)

Geology 150 Physical Geology (4)

Geology 152 Historical Geology (4)

Geology 155 Oceanography (4)

Geology 422 Environmental Geology (4)

Upper Division**Required in Biology (16 units):**

302 Biometrics (4)

330 Cell Biology (4)

415 General Genetics (4)

460 General Ecology (4)

Biology Area Courses (12–13 units):

The following courses from the areas of Anatomy-Morphology and Systems Physiology are recommended:

426 Algae (4)

or

427 Fungi (4)

430 Plant Physiology I (4)

or

438 Comparative Physiology (5)

Required in Taxonomy-Systematics area:

440 Taxonomy of Angiosperms (4)

Electives in Biology (16 units):

Select *two* from following:

340A Animal Systematics and Natural History I (4)

340B Animal Systematics and Natural History II (4)

451 Ornithology (4)

452 Ichthyology (4)

453 Herpetology (4)

455 Mammalogy (4)

457A Marine Invertebrate Zoology I (4)

457B Marine Invertebrate Zoology II (4)

458 General Entomology (4)

Select *two* from following:

461 Freshwater and Marine Botany (4)

462 Plant Ecology (4)

463 Plant Geography (4)

470 Conservation of Wildlife (4)

471 Population Ecology (4)

472 Marine Zoology (4)

473 Applied Entomology (4)

Electives in Related Fields (12 units):

Select *three* from following:

In English:

306 Technical Report Writing (4)

In Economics:

445 Economics of Natural Resources and the Environment (4)

In Geography:

402 Geomorphology (4)

410 Climatology (4)

415 Geographic Perspectives on Environment (4)

460 Field Geography (5)

In Geology:

360 Geological Mapping (3)

or

421 Geology of California (4)

Bachelor of Arts Degree

The Bachelor of Arts degree in Biology is intended to provide the breadth and depth in biology and supporting physical sciences needed by workers in non-technical fields associated with various aspects of applied biology. Persons with interests in graduate work in biology or the medical fields or in teaching at the secondary level are referred to the Bachelor of Science degree program.

Requirements for the Major

Of the 186 units required for the Bachelor of Arts degree in Biology, 88–90 units are in the major. Competence in mathematics through Mathematics 103 is required; this may be met by satisfactory performance on a mathematics placement examination.

Lower Division**Required Courses (40 units):****In Biology:**

101 Biology of Animals (5)

102 Biology of Plants (5)

103 Concepts of Biology (3)

In Chemistry:

Select with approval of adviser:

101–103 General Chemistry (5-5-5)

or

151–153 Fundamentals of Chemistry (5-5-5)

(Former recommended for students who may wish to transfer to B.S. program.)

In Physics:

101–103 Physics (4-4-4)

Electives (8–10 units):

Select with approval of adviser *two* courses from the following: Geology 150, Microbiology 150, Astronomy 151–2, Biology 200A, Biology 200B.

Upper Division**Required Courses (24 units):****In Biology:**

340AB Animal Systematics and Natural History I, II (4-4)

415 General Genetics (4)

460 General Ecology (4)

Select two from following:

430 Plant Physiology I (4)

440 Taxonomy of Angiosperms (4)

463 Plant Geography (4)

Electives in Biology (16 units):

Select with approval of adviser.

Minor in Biology

A minor in Biology is available for students majoring in other fields. It offers a general exposure to the field and would be useful in some areas of environmental science, recreation, conservation, and comparable fields.

A total of 30–34 units is required, with 22–26 units in lower division courses and 8 units in upper division electives.

Lower Division

Required Courses (22–26 units):

In Biology:

101 Biology of Animals (5)

102 Biology of Plants (5)

103 Concepts of Biology (3)

In Chemistry:

151 Fundamentals of Chemistry (5)

In Physics:

150 Principles of Physics (4)

In Mathematics:

102 College Algebra (4)

(May be met by satisfactory performance on mathematics placement examination or by high school preparation certified as adequate by the Department of Mathematics.)

Upper Division

Electives in Biology (8 units):

Select courses with approval of departmental adviser.

The Credential Program

The Bachelor of Science and Bachelor of Arts degree programs have been approved by the Commission for Teacher Preparation and Licensing for examination waiver for the single subject credential in Life Science. Students should consult advisers in the department and in the School of Education.

Courses of Instruction

Lower Division Courses

101 Biology of Animals (5)

Prerequisite: One year of high school biology. General introduction to organismic animal biology, including survey of phyla, function and development of organ systems, and adaptation to environment. Lecture 3 hours, laboratory 6 hours.

102 Biology of Plants (5)

Prerequisite: One year of high school biology. Survey of plant phyla, relationships of structure to function, unique adaptations to environment; ecological and eco-

nomic roles of various plant groups. Lecture 3 hours, laboratory 6 hours.

103 Concepts of Biology (3)

Prerequisites: A grade of C or better in Biology 101 and 102. Nature of living matter; selected problems in information flow and control mechanisms, evolutionary change, role of environment and medium in sustaining life, and economics of energy.

150 Introductory Botany (4)

Introduction to botany, with emphasis on structure and function of vascular plants and their role in economic and cultural history. Lecture 3 hours, laboratory 2 hours. May not be taken for credit by Biology majors or minors.

151 Principles of Population Biology (4)

Emphasis on biology of groups of organisms, heredity, evolution, growth and development, and ecology. Lecture 3 hours, laboratory 2 hours. May not be taken for credit by Biology majors or minors.

152 Animal Life (4)

Survey of animals with emphasis on their adaptations to the environment and their importance to man. Lecture 3 hours, laboratory 2 hours. May not be taken for credit by Biology majors or minors.

165 Man and Biological Environment (4)

Biological implications of man's effect on the environment. Emphasis on biological problems created by overpopulation and pollution. Designed for non-majors in sciences.

168 Marine Biology (4)

Natural history of marine organisms. Adaptations for survival in diverse marine environments; effects of human exploitation of marine wildlife. May not be taken for credit by biology majors.

200AB Human Anatomy and Physiology (5-5)

Prerequisite: One semester of high school chemistry; college chemistry recommended but not required. Lectures, demonstrations and dissections illustrating structure and function of the human body. Lecture 3 hours, laboratory 6 hours. May be used only in B.A. program in Biology for majors.

220 Plant Kingdom (3)

Prerequisite: Biology 150. Introduction to plant forms, with emphasis on life histories, structure, and evolutionary relationships. Lecture 2 hours, laboratory 3 hours.

Upper Division Courses

302 Biometrics (4)

Prerequisite: Mathematics 103. Statistical analysis applied to biological problems, with emphasis on sampling, experimental design, chi-square analysis, t-test, analysis of variance, regression analysis, and correlation analysis. Lecture 3 hours, laboratory 3 hours.

305 Science Materials (4)

Prerequisite: A grade of C or better in Biology 103. Collection, maintenance, and preservation of living things; construction and use of science materials. Lecture 2 hours, laboratory 6 hours.

330 Cell Biology (4)

Prerequisites: A grade of C or better in Biology 103; Chemistry 208C. Physiology of organelles, cell surface, control of metabolism and in formation flow; mechanism of cell and intracellular movement, using microbial, plant, and animal examples. Lecture 3 hours, laboratory 3 hours.

340A Animal Systematics and Natural History I (4)

Prerequisite: A grade of C or better in Biology 103. Evolutionary, adaptive, and survival mechanisms of animal life. Laboratory work emphasizes invertebrate taxonomy. Lecture 3 hours, laboratory 3 hours.

340B Animal Systematics and Natural History II (4)

Prerequisite: Biology 340A. Evolutionary, adaptive, and survival mechanisms of animal life. Laboratory work emphasizes vertebrate taxonomy. Lecture 3 hours, laboratory 3 hours.

361N Ecology of the Urban Environment (4)

Prerequisite: Biology 150, 151, or 152. Influences of urbanization on natural plant and animal communities with special emphasis on the Los Angeles basin; ecological consideration of effects of agriculture, housing, natural areas, pollution, parks and recreational areas. Lecture 2 hours, discussion 1 hour, laboratory 3 hours including field trips. May not be taken for biology major.

401 Microtechniques (4)

Prerequisites: Chemistry 208AB and upper division standing in a biological science. Preparative and histochemical study of cells and tissues, including squash, sectioning and staining methods. Lecture 1 hour, laboratory 9 hours.

402 Electron Microscopy (4)

Prerequisites: Senior standing in a biological or physical science major and consent of instructor. Theory of electron microscopy; practical experience in preparation of biological and physical materials for examination and in operation of electron microscope. Lecture 1 hour, laboratory 9 hours.

403 Plant Tissue Culture (4)

Prerequisites: Biology 431 and Chemistry 208AB. Experimental cultivation of cells, tissues, and organs to investigate hormonal, nutritional, and morphogenetic aspects of plant growth and differentiation under aseptic conditions. Lecture 1 hour, laboratory 9 hours.

412 Cytology (4)

Prerequisites: Biology 415 and Chemistry 153 or 208C. General cellular structure and organization. Lecture 2 hours, laboratory 6 hours.

415 General Genetics (4)

Prerequisites: A grade of C or better in Biology 103; Mathematics 103. Principles of classical and molecular genetics as demonstrated in plants, animals, and microorganisms. Emphasis on mechanisms of inheritance, structure of genetic material, breeding experiments with suitable organisms, analysis and interpretation of data. Lecture 3 hours, laboratory 3 hours.

416 Molecular Genetics (4)

Prerequisites: Biology 415 and Chemistry 208C. Special topics concerning chemical nature of genes, their replication, and their mode of action at molecular level.

418 Heredity and Evolution (4)

Prerequisite: Biology 415. Organic evolution, with emphasis on mechanisms involved.

419N Human Genetics (4)

Prerequisites: Biology 151 or 152; Chemistry 152. Basic principles of genetics and their applicability to human heredity. Emphasis on pedigrees, genetic bases of important traits, genetic defects, genetic counseling. Not open to Biology majors.

423 Comparative Anatomy (5)

Prerequisite: A grade of C or better in Biology 103. Evolution of vertebrate structure and organ systems including chief environmental adaptation. Lecture 3 hours, laboratory 6 hours.

424 General Embryology (4)

Prerequisites: A grade of C or better in Biology 103; Chemistry 208C. Theoretical consideration of chemistry and physiology of fertilization, genetic programming of development, mechanisms of differentiation, and cellular interactions in development. Lecture 2 hours, laboratory 6 hours.

425 Plant Anatomy (4)

Prerequisite: A grade of C or better in Biology 103. Microscopic structure of vascular plants, with emphasis on organization and functioning of meristems; structure, function and differentiation of cells and tissues; development and comparative anatomy of stem, leaf and root. Lecture 2 hours, laboratory 6 hours.

426 Algae (4)

Prerequisite: A grade of C or better in Biology 103. Classification, morphology, and evolutionary relationships of principal orders of algae. Lecture 2 hours, laboratory 6 hours.

427 Fungi (4)

Prerequisite: A grade of C or better in Biology 103. Structure, development, physiology, and classification of fungi. Lecture 2 hours, laboratory 6 hours.

428 Morphology of Vascular Plants (4)

Prerequisite: A grade of C or better in Biology 103. Comparative morphology and reproduction of ferns, fern allies and seed plants. Lecture 2 hours, laboratory 6 hours.

429 Animal Histology (5)

Prerequisite: A grade of C or better in Biology 103. Basic structural, chemical and physiological aspects of tissues, recent advances in histological technology; traditional microscopic study of tissues and organs, primarily mammalian. Lecture 3 hours, laboratory 6 hours.

430 Plant Physiology I (4)

Prerequisites: A grade of C or better in Biology 103; Chemistry 103 or 153. Vegetative and reproductive growth and development, growth regulation, dormancy; plant-water relations.

431 Plant Physiology II (4)

Prerequisites: A grade of C or better in Biology 103; Chemistry 208C. Mineral nutrition, photosynthesis, respiration, nitrogen metabolism, physiological role of major plant products. Lecture 2 hours, Laboratory 6 hours.

433 Animal Physiology I (4)

Prerequisites: Biology 330 and Chemistry 208C. Physiological phenomena at organismic level. Biological control systems: muscular, nervous, endocrine, circulatory. Laboratory techniques and principles. Lecture 3 hours, laboratory 3 hours.

434 Animal Physiology II (4)

Prerequisites: Biology 330 and Chemistry 208C. Physiological phenomena at organismic level. Coordinated body systems: digestive, respiratory, excretory, reproductive. Laboratory techniques and principles. Lecture 3 hours, laboratory 3 hours.

437 Advanced Animal Physiology (4)

Prerequisite: Biology 330. Various cellular phenomena such as permeability, respiration, excitation, and conduction. Lecture 3 hours, laboratory 3 hours.

438 Comparative Physiology (5)

Prerequisites: Biology 330 or 340B, and one year of college chemistry. Physiological principles and particular adaption, with special emphasis on invertebrates. Laboratory work includes independent projects. Lecture 3 hours, laboratory 6 hours.

440 Taxonomy of Angiosperms (4)

Prerequisite: A grade of C or better in Biology 103. Identification, classification and nomenclature of angiosperms. Speciation and population structure. Lecture 2 hours, laboratory or field work 6 hours; weekend field trips may be required.

442 Principles of Animal Taxonomy (2)

Prerequisite: A grade of C or better in Biology 103. Fundamental concepts of animal systematics and taxonomy, including taxonomic characters, methods of classification, use of names, rules of nomenclature, species concept, and polytypic species.

451 Ornithology (4)

Prerequisite: A grade of C or better in Biology 103. Taxonomy, distribution, physiology, life history, ecology, and behavior of birds. Lecture 2 hours, laboratory and field work 6 hours.

452 Ichthyology (4)

Prerequisite: A grade of C or better in Biology 103. Taxonomy, distribution, ecology and physiology of fishes. Lecture 2 hours, laboratory and field work 6 hours.

453 Herpetology (4)

Prerequisite: A grade of C or better in Biology 103. Taxonomy, distribution, ecology and physiology of amphibians and reptiles. Lecture 2 hours, laboratory and field work 6 hours.

455 Mammalogy (4)

Prerequisite: A grade of C or better in Biology 103. Taxonomy, distribution, ecology and physiology of mammals. Lecture 2 hours, laboratory and field work 6 hours.

456 Vertebrate Paleontology (4)

Prerequisites: A grade of C or better in Biology 103; 423 recommended, or alternate vertebrate zoology courses with department approval. Structural characteristics and evolutionary trends of fossil vertebrates and their stratigraphic distribution. Lecture 3 hours, laboratory 3 hours.

457A Marine Invertebrate Zoology I (4)

Prerequisite: A grade of C or better in Biology 103. Classification, characteristics, phylogeny, and natural history of marine invertebrates from Protozoa through Annelida. Major taxa considered in evolutionary sequence with an emphasis on local fauna. Lecture 2 hours, laboratory 6 hours.

457B Marine Invertebrate Zoology II (4)

Prerequisite: Biology 457A. Classification, characteristics, phylogeny, and natural history of marine invertebrates from Arthropoda through Chordata. Major taxa considered in evolutionary sequence with an emphasis on local fauna. Lecture 2 hours, laboratory 6 hours.

458 General Entomology (4)

Prerequisite: A grade of C or better in Biology 103. Anatomy, ecology, classification, and habits of insects, with emphasis on western species. Techniques for capture, observation, and preservation of specimens. Lecture 2 hours, laboratory 6 hours.

460 General Ecology (4)

Prerequisite: A grade of C or better in Biology 103. Relation of plants and animals to their environment and to each other; environmental complexes, ecological life histories, and relationships among individuals in populations and communities. Lecture 2 hours, laboratory and field work 6 hours.

461 Freshwater and Marine Botany (4)

Prerequisites: Biology 426 and 460. Structure and physiology of algae and other aquatic plants in relation to their adaptation to freshwater and marine habitats. Lecture 3 hours, laboratory 3 hours.

462 Plant Ecology (4)

Prerequisite: Biology 460. Plants and plant associations in relation to physical and biotic environments, including plant community structure, history, analysis and developmental processes. Lecture 2 hours, laboratory and/or field work 6 hours.

463 Plant Geography (4)

Prerequisite: Biology 460. Plant formations and flora of the world, with emphasis on principles and problems of their development; detailed consideration given to North American plant communities.

464 Freshwater Biology (4)

Prerequisites: Biology 457B, 473, and one year of chemistry. Biological productivity of inland waters and physical, chemical, geological, and biotic factors which determine it. Lecture 2 hours, laboratory 6 hours.

465N Nature and California Wilderness (3)

Prerequisite: Biology 151. Natural plant and animal communities in California; their succession, adaptation, stabilization or extinction; biota of grassland, chaparral, woodland, forest, alpine, and desert associations. May not be taken for Biology major. Lecture 2 hours, laboratory-field trips 3 hours.

470 Conservation of Wildlife (4)

Prerequisite: Biology 460. Value of wildlife to humans; environmental problems of wildlife; habitat improvement; ecology, life history, and management of selected species. Lecture 3 hours, laboratory and field work 3 hours.

471 Population Ecology (4)

Prerequisites: Biology 302 and 460. Principles underlying the structure and dynamics of animal populations, including density, growth rates, productivity, mortality factors, control, and mixed-species interactions. Lecture 3 hours, laboratory or field work 3 hours.

472 Marine Zoology (4)

Prerequisite: Biology 460. Field and laboratory familiarization with ecology of marine environments and their animal inhabitants. Lecture 3 hours, laboratory or field work 3 hours.

473 Applied Entomology (4)

Prerequisite: A grade of C or better in Biology 103. Effects of destructive and useful insects, and types of control used for detrimental species. Lecture 2 hours, laboratory 6 hours.

475 Animal Behavior (3)

Prerequisites: A grade of C or better in Biology 103 or one year of zoology. Natural behavior of animals, with emphasis on mechanism, functions, and evolution of behavior.

480 Parasitic Protozoa (4)

Prerequisite: A year of general biology. Parasitic protozoa of man and other animals. Emphasis on classification, life history, and control. Lecture 3 hours, laboratory 3 hours.

481 Parasitic Helminths (4)

Prerequisite: A grade of C or better in Biology 103. Parasitic helminths of man and other animals. Emphasis on classification, life history, and control. Lecture 3 hours, laboratory 3 hours.

482 Medical Entomology (4)

Prerequisite: A grade of C or better in Biology 103. Role of Arthropods, especially insects, in transmission of human and animal disease. Emphasis on life histories, control, and prevention. Lecture 3 hours, laboratory 3 hours.

485 Medical Parasitology (5)

Prerequisite: A grade of C or better in Biology 103. For microbiology and medical technology students only; a synopsis of the parasitic protozoa and helminths of man. Emphasis on recognition and control. Lecture 3 hours, laboratory 6 hours.

486N Advanced Topics in Cardiovascular Physiology (3)

Prerequisites: Biology 200AB and Chemistry 153, or consent of instructor. Factors that control and affect cardiovascular system; abnormal conditions discussed whenever appropriate. Not open to Biology majors or minors.

487N Advanced Topics in Regulation of Body Fluids and Electrolytes (3)

Prerequisites: Biology 200AB and Chemistry 153, or consent of instructor. Selected topics relating to control of water and electrolyte balance. Not open to Biology majors or minors.

488N Economic Plants (4)

Prerequisite: Biology 150 or equivalent. Economic, botanical, historical, ecological implications of plant life as related to human activities. Lecture 3 hours; field trips. May be taken only as a free elective by biology majors.

499 Undergraduate Directed Study (1-4)

Prerequisites: Consent of full-time faculty member in consultation with department chairman, and a g.p.a. of 2.5 or better. Projects must be approved before registration. Student must have ability to assume responsibility for independent research and analysis. Regular discussion of progress with sponsor before presentation of final written report. May not be used for credit toward the master's degree. Graded CR/NC only.

Business

The major objective of the School of Business and Economics is to equip men and women with the intellectual tools needed to assume responsible positions in business, industry, education, government, and the managerial aspects of social service organizations. The preparation includes both a basic understanding of the entire social and physical environment of the urban community, of which business and economics are an integral part, and a substantial background in the underlying fields of knowledge dealing specifically with Business and Economics.

The School of Business and Economics offers undergraduate and graduate degree programs in business administration, business education, management science, and economics. The graduate degree programs are described in the *Graduate Programs* section.

Accreditation

The School of Business and Economics is nationally accredited on both the graduate and undergraduate levels by the American Association of Collegiate Schools of Business.

The Faculty

Professors: A.M.A. Aish, Henry Ang, Philip B. Bergfield, Keith Blunt, Warren C. Bray, Emily C. Chang, E. Kennedy Cobb, Bernard Codner, John R. Cox, George N. Francis, George A. Gustafson, H. Lawrence Hall, Leonard W. Hein, Lawrence S. Hill, Ke Ting Hsia, H. Milton Jones, William A. Knoke, Wilmer O. Maedke, Donald G. Malcolm, Mildred B. Massey, Paul McElhiney, Frederic E. Mints, Donald A. Moore, Edward A. Nelson, J. C. Ray, Emanuel C. Salemi, Gordon B. Severance, Ralph Spanswick, Alvin E. Tuohino, William C. Waddell, H. Jean Waldrop, Richard J. Whiting, Chaucer Yang, Kenneth Zimmer.

Associate Professors: Laird B. Allison, William G. Baker, Edwin Bartenstein, William H. Bright, Harold Brumm, Jr., Laurence E. Clark, Kenneth D. Courtney, Marc J. Epstein, Erika Georges, John E. Gessford, William Graham, Judd Hammack, John M. Hemphill, Charles J. Inacker, Samuel H. Jopling, Rauf-ur R. Khan, Arthur J. Kirsch, Peter Lockett, Marshall E. Reddick, Robert G. Salyer.

Assistant Professors: Charlene Abendroth, Wanda Brown, Giorgio Canarella, Michael Diamond, George N. Engler, Diana T. Flamholtz, Donald G. Hall, Stephen K. Hartman, Peter D. Hechler, Wayne Son Lieu, Dennis Murphy, L. D. Myers, Jr., Ronald Pierce, Nikolai Pulchritudoff, Lawrence R. Schenck, Paul Schnitzel, John F. Steiner, Earl O. Stephens, Ben L. Trykowski, Robert Verkler, MaryLynne Ward, Paul V. Washburn, Gary S. Watson, Dolores B. Wigney.

The Undergraduate Program

Undergraduate programs leading to bachelor's degrees are offered in Business Administration, Business Education, Economics, and Management Science. The School also offers a minor in Basic Business and a minor in Business Education.

Bachelor of Science Degree in Business Administration

A total of 192 units is required for the Bachelor of Science degree in Business Administration, of which 100–104 units are in the major. All degree candidates must have 72 units in courses other than Business and Economics.

Requirements for the Major

All majors except Accounting (68 units) take a common core of 72 units of lower and upper division courses in Business, Economics, and Mathematics. In addition, each student with upper division standing selects one of the following thirteen options.

1. Accounting
2. Business Arts—Pre-Legal
3. Business Economics and Statistics
4. Business Information Systems
5. Finance
6. Insurance
7. Labor Relations

8. Management
9. Marketing
10. Office Administration
11. Real Estate
12. Special Business
13. Transportation

Core Requirements

The 72 units in the common core of required courses for all majors in Business Administration are listed below.

Lower Division

Twenty-nine units are required, as follows:

In Business:

- 200AB Principles of Accounting (3-3)
- 205 Foundations of Business Law (4)
- 209 Applied Business and Economics Statistics I (3)
- 294 Business Computer Systems (4)

In Economics:

- 201AB Introduction to Economics I, II (3-3)

Students with a major in Business may substitute Economics 200AB, Economics 200AB, but not 201AB, may be used to satisfy General Education requirements in Area II, Social Sciences.

In Mathematics:

- 240AB Introductory Mathematical Analysis for Business (4-2)

Upper Division

Forty-three units are required (39 in Accounting option), as follows:

In Business:

- 300 Managerial Accounting (4)
- (Not required in Accounting option)*
- 301 Administrative Communications (4)
- 303 Business Finance (4)
- 304 Principles of Marketing (4)
- 306 Introduction to Management Science (4)
- 307 Management and Organizational Behavior (4)
- 308 Business Responsibilities in Society (4)
- 309 Applied Business and Economic Statistics II (3)
- 391 Quantitative Methods in Business and Economics (4)

In Economics:

- 303 Money, Banking, and the Economy (4)
- 310 Economics of the Business Firm (4)

Option Requirements

Each student selects one of the 13 options described below, comprising 28–36 units, to fulfill requirements for the major.

Option 1: Accounting

ADVISEMENT: *Accounting and Business Information Systems Department, ST513, Ph. 224-3887.*

This option prepares students for careers in either *public accounting*, serving clients professionally in the areas of financial accounting, cost accounting, auditing, taxes, and systems; or *managerial accounting*, dealing with the func-

tions of the controller in a business, institution or government agency.

Required Courses (24 units):

Business 320A, 320B, 321, 420A, 422A, 424A

Electives (12 units):

Select *three* courses from following: Business 305 or 480, 420B, 421, 422B, 423, 424B, 427, 428, 433, 481, 482, 488.

NOTE: A student must earn a grade of C or better in Business 200B and 320A, or obtain permission of the Accounting Department, in order to continue with the accounting option.

Option 2: Business Arts—Pre-Legal

ADVISEMENT: *Finance and Law Department, ST717, Ph. 224-3881.*

This option enables students to meet the needs of firms desiring business graduates with less specialization. It also may be used by pre-law students or students who wish a broader preparation at the undergraduate level. It combines the basic business sequence with liberal arts.

Required Courses (16 units):

Economics 471, English 406, Political Science 427, History 479.

Electives (12 units):

Select courses with prior approval of adviser.

Option 3: Business Economics and Statistics

ADVISEMENT: *Economics Department, ST917, Ph. 224-3884.*

This option equips students with the major skills of quantitative analysis needed by business statisticians in the rapidly expanding research departments of business firms and governmental agencies, and by executive assistants in moderate-sized and large firms.

Required Courses (12 units):

Business 409
Economics 403, 410

Electives (16 units):

Select four courses from Business 422A, 446, 467, 482, 486, 491; Economics 413, 414.

Option 4: Business Information Systems

ADVISEMENT: *Accounting and Business Information Systems Department, ST517, Ph. 224-3887.*

This option prepares students for careers in information systems, with concentration in electronic data processing. Information systems specialists plan, gather, process, and report on data useful in management.

Required Courses (28 units):

Business 481, 482, 483, 484, 486, 487, 488.

Option 5: Finance

ADVISEMENT: *Finance and Law Department, ST717, Ph. 224-3881.*

This option prepares students for positions in corporate financial management or investments, or with banks and other financial institutions.

Required Courses (20 units):

Business 305,* 331, 332, 433, 434.

*Business 480 required instead of 305 for students with credit for 8 or more quarter units of lower division Business Law.

Electives (8 units):

Select two courses with prior approval of adviser.

Option 6: Insurance

ADVISEMENT: Finance and Law Department, ST717, Ph. 224-3881.

This option provides study of insurance principles, analytical methods, and the decision-making and communication skills required for insurance company management at both regional and home office levels. It also prepares students interested in risk management positions with other than insurance firms.

Required Courses (20 units):

Business 332, 335, 336, 435, 436

Electives (8 units):

Select two courses with prior approval of adviser.

Option 7: Labor Relations

ADVISEMENT: Economics Department, ST917, Ph. 224-3884.

This option develops competence in labor relations required of managers, supervisors, conciliators, and similar officials in industry, finance, education, government, or labor unions.

Required Courses (16 units):

Economics 302, 420; Business 472, 473

Electives (12 units):

Select three courses with prior approval of adviser.

Option 8: Management

ADVISEMENT: Management Department, ST717, Ph. 224-3881.

Business management offers a choice of three areas of concentration: (A) Administrative, (B) Personnel Relations, (C) Production.

ADMINISTRATIVE: Develops competence in administrative and supervisory techniques required of managers, supervisors, and comparable administrative officers in the fields of industry, finance, government, and labor.

Required Courses (28 units):

Business 434, 460, 461, 462, 477, 479, and one additional 400-level course in Business, selected with approval of adviser.

PERSONNEL RELATIONS: Develops competence in personnel relations required of managers, supervisors, conciliators, and similar officials in industry, finance, education, and government.

Required Courses (20 units):

Business 472, 473, 474, 475; Economics 302.

Electives (8 units):

Select two 400-level courses with approval of adviser.

PRODUCTION: Prepares students for employment in production management, production control, motion and time study, methods analysis, and related assignments.

Required Courses (28 units):

Business 460, 463, 464, 465, 467, 496A, and 477 or 496B.

Option 9: Marketing

ADVISEMENT: Marketing and Transportation Department, ST917, Ph. 224-3884.

This option introduces students to specialized marketing fields, such as marketing management, advertising, retailing, salesmanship, marketing research, transportation, and international trade.

Required Courses (12 units):

Business 342, 345, 442.

Electives (16 units):

In addition to above courses, students select four courses from following list. The Department recommends that elective courses be taken prior to Business 442, required above.

Business 340, 341, 343, 344, 346, 347, 348, 440, 441, 443, 445, 446, 447, 448, 454MK; Economics 406.

Option 10: Office Administration

ADVISEMENT: Business Education Department, ST501, Ph. 224-3887.

This option prepares students for supervisory and middle management positions in records administration, office systems design and analysis, and administrative office management.

Required Courses (24 units):

Business 313, 401, 412, 414, 311 or 415 and 416, 419.

Option 11: Real Estate

ADVISEMENT: Finance and Law Department, ST717, Ph. 224-3881.

This option prepares students for careers in real estate, including positions with brokerage and appraisal firms, lending institutions, and governmental agencies.

Required Courses (20 units):

Business 338, 381, 438A, 438B and 439.

Electives (8 units):

Select two courses with prior approval of adviser.

Option 12: Special Business

ADVISEMENT: Dean's Office, ST124, Ph. 224-2727.

This option provides opportunities for programs designed to meet individual interests not covered by the other options. Permission to take this option must be secured from the Dean of the School.

Required Courses (28 units):

Courses in Business, Economics, and relevant fields, to be worked out in conference with the school dean and appropriate faculty members, depending upon the unique and special objectives of the student.

Option 13: Transportation

ADVISEMENT: *Marketing and Transportation Department, ST917, Ph. 224-3884.*

This option deals with the transportation and physical distribution alternatives and systems which are available in the business world. Also treated are management and government regulation of transportation carriers.

Required Courses (12 units):

Business 343, 348, 448

Electives (16 units):

In addition to above courses, students select four courses from the following list. The department recommends that elective courses be taken prior to Business 448, required above.

Business 341, 342, 345, 346, 347, 442, 443, 447, 448, 449, 450, 454MK (International Transportation).

Students may also select electives in the Department of Industrial Studies after obtaining written approval of adviser.

Minor in Basic Business

ADVISEMENT: *Undergraduate Advisement Center, SH145C, Ph. 224-3652.*

The purpose of the minor in Basic Business is to provide a structured program for students majoring in academic degree programs outside the School of Business and Economics but wishing to augment their major with basic knowledge in business and economics.

For students who intend to pursue further study in Business at advanced undergraduate or graduate levels, Mathematics 240AB or its equivalent is strongly recommended. The 39 units required for the minor are as follows:

Lower Division

Required in Business (17 units):

200AB Principles of Accounting (3-3)

205 Foundations of Business Law (4)

209 Applied Business and Economic Statistics I (3)

294 Business Computer Systems (4)

Required in Economics (6 units):

201AB Introduction to Economics I, II (3-3)

Students with a minor in Business may substitute Economics 200AB, Economics 200AB, but not 201AB, may be used to satisfy General Education requirements in Area II, Social Sciences.

Upper Division

Required in Business (12 units):

303 Business Finance (4)

304 Principles of Marketing (4)

307 Management and Organizational Behavior (4)

Elective in Business (4 units):

Select one additional upper division course.

Bachelor of Science Degree in Business Education

ADVISEMENT: *Business Education Department, ST517, Ph. 224-3887.*

The Business Education programs are designed specifically for students who plan to become business teachers, and who may qualify for a preliminary teaching credential. Advisers in both the School of Business and Economics and the School of Education should be consulted.

Requirements for the Major

Students electing the major in Business Education must demonstrate skills in typing equivalent to those required for Business 102B; in addition, those electing the secretarial option must demonstrate proficiency in shorthand and transcription equivalent to the requirements for Business 210B. These requirements may be met by college credit or by passing proficiency examinations in the subjects.

Required for the Bachelor of Science degree are 192 units, of which 88-90 units are in lower and upper division courses in Business and Economics. Several required courses in professional education are taken outside the major.

Lower Division

Required in Business (21 units):

200AB Principles of Accounting (3-3)

205 Foundations of Business Law (4)

209 Applied Business and Economic Statistics I (3)

213 Typewriting Production Applications (4)

294 Business Computer Systems (4)

Required in Economics (6 units):

201AB Introduction to Economics I, II (3-3)

Students with a major in Business Education may substitute Economics 200AB, Economics 200AB, but not 201AB, may be used to satisfy General Education requirements in Area II, Social Sciences.

Upper Division

Required in Business (38 units):

301 Administrative Communications (4)

303 Business Finance (4)

304 Principles of Marketing (4)

307 Management and Organizational Behavior (4)

313 Office Organization and Management (4)

410AB Problems of Business Education I, II (3-3)

412 Office Systems and Procedures (4)

414 Records Management (4)

419 Office Simulation (4)

In addition to requirements in the major program, students preparing for the single subject credential in Business are required to take the following course in Secondary Education, prerequisite to enrollment in directed teaching:

421Bt Methods of Teaching Typewriting (3)

This course is part of the credential requirement, not part of the degree major.

A g.p.a. of 2.35 is required of all students for admission to directed teaching. For students preparing to teach

business subjects, a minimum of 2.5 in all upper division business courses is required.

Options (22–24 units):

Select 11–12 units in each of two options which follow, for total of 22–24 units. One option should be Accounting or Secretarial.

Required in Business:

320A Intermediate Accounting I (4)

Select two from following:

In Business:

300 Managerial Accounting (4)

320B Intermediate Accounting II (4)

321 Tax Accounting I (4)

422A Cost Accounting I (4)

In Secondary Education:

421Bb Methods of Teaching Bookkeeping (3)

Secretarial Option (11 units):

Required in Business:

311 Administrative Secretarial Procedures (4)

401 Administrative Business Reports (4)

In Secondary Education:

421Bs Methods of Teaching Shorthand (3)

Distributive Education Option (11–12 units):

In Business:

344 Principles of Retailing (4)

Select two from following:

In Business:

340 Principles of Advertising (4)

341 Selling and Sales Administration (4)

342 Consumer Behavior (4)

In Secondary Education:

421Bd Methods of Teaching Distributive Education Subjects (3)

General Business Option (11–12 units):

Select three from following:

In Business:

305 Commercial Law (4)

330 Credits and Collections (4)

331 Financial Institutions and Markets (4)

332 Investments (4)

335 Risk Management and Insurance (4)

338 Real Estate Principles (4)

In Economics:

303 Money, Banking and the Economy (4)

In Secondary Education:

421Bg Methods of Teaching General Business Subjects (3)

Minor in Business Education

The minor in Business Education serves students in degree programs in fields other than Business who wish to teach business subjects in secondary schools in addition to their major subject. Students majoring in Business Administration are advised to complete course requirements of the minor program if they wish to pursue a credential program.

Students electing the minor in Business Education must demonstrate skills in typing equivalent

to those required for Business 102B; in addition, those electing the secretarial option must demonstrate proficiency in shorthand and transcription equivalent to the requirements for Business 210B. These requirements may be met by college credit or by passing proficiency examinations in the subjects. The minor requires a minimum of 43 units. Several required courses in professional education are taken outside the minor.

Lower Division

Required in Business (14 units):

113 Organization of American Business (4)

200AB Principles of Accounting (3-3)

213 Typewriting Production Applications (4)

Upper Division

Required in Business (18 units):

301 Administrative Communications (4)

313 Office Organization and Management (4)

410AB Problems of Business Education I, II (3-3)

Select one of following:

412 Office Systems and Procedures (4)

or

414 Records Management (4)

Electives (11–12 units):

Select three courses from one of four options listed above for major.

The Credential Program

ADVICE: Business Education Department, ST517, Ph. 224-3887.

Business has been defined as a single subject area under new state legislation which governs the credentialing of teachers. Graduates with a major in Business Education may be required to take an examination in this area in order to qualify for a single subject credential. Graduates with a major in Business Administration, and those with a minor in Business Education accompanying any major, will be required to take such an examination. Please consult advisers in both the Department of Business Education and the School of Education.

Bachelor of Science Degree in Management Science

ADVICE: Management Department, ST717, Ph. 224-3881.

The aim of Management Science is to aid management in the decision-making process by replacing intuition with systematic analysis of alternative solutions to management problems under conditions of complexity and uncertainty. The Management Science major studies the methods of developing and using models to solve problems in such areas as the optimal allocation of limited resources to simultaneously competing demands, inventory systems, replacement, maintenance, system reliability, waiting lines, and sequencing of activities.

Requirements for the Major

A total of 198 units is required for this degree, of which 112 units are in the major. All degree candidates must have 72 units in courses other than Business and Economics.

Lower Division

Required Courses (37 units):

In Business:

- 202 Survey of Accounting (4)
- 205 Foundations of Business Law (4)
- 209 Applied Business and Economic Statistics I (3)
- 294 Business Computer Systems (4)

In Economics:

- 201AB Introduction to Economics I, II (3-3)

Students with a major or minor in Business may substitute Economics 200AB. Economics 200AB, but not 201AB, may be used to satisfy General Education requirements in Area II, Social Sciences.

In Mathematics:

- 206 Calculus I: Differentiation (4)
- 207 Calculus II: Integration (4)
- 255 Introduction to Matrix Theory (4)

In Philosophy:

- 250 Logic (4)

Upper Division

Required Courses (59 units):

In Business:

- 300 Managerial Accounting (4)
- 303 Business Finance (4)
- 304 Principles of Marketing (4)
- 306 Introduction to Management Science (4)
- 307 Management and Organizational Behavior (4)
- 309 Applied Business and Economic Statistics II (3)
- 409 Advanced Applied Business and Economic Statistics (4)
- 482 Basic Information Systems Design (4)
- 487 Introduction to Strategic Information Systems (4)
- 496AB Operations Research I, II (4-4)

In Economics:

- 303 Money, Banking, and the Economy (4)
- 310 Economics of the Business Firm (4)
- 413 Mathematical Economics (4)
- 414 Econometrics (4)

Electives in Business (16 units):

Select two from following:

- 463 Motion and Time Study (4)
- 464 Production and Material Control (4)
- 467 Quality Control (4)

Select two additional courses with approval of adviser.

Courses of Instruction

Lower Division Courses

102A Beginning Typewriting (1)

Emphasis on learning basic typewriting skills, developing speed and accuracy, solving problems and tabulating, and preparing business letters.

102B Typewriting Skill Development (1)

Prerequisite: Business 102A or equivalent. Emphasis on correct typewriting techniques, skill improvement in speed and accuracy, statistical tabulation, technical business letters and forms.

103A Shorthand Theory (2)

Prerequisite: Business 102B or equivalent. Principles of Gregg Shorthand (Diamond Jubilee Series) applied to the development of an extensive shorthand vocabulary. Emphasis on basic shorthand theory.

103BC Shorthand Dictation and Transcription (2-2)

Prerequisite: Business 103A or equivalent. Emphasis on speed and accuracy in reading and writing Gregg Shorthand (Diamond Jubilee Series); development of skill in producing mailable typed transcripts, business letters, and articles from dictated material. Minimum speed of 90 words a minute required to complete 103C.

113 Organization of American Business (4)

Scope, function, and organization of modern business; fundamental concepts, principles, and current practices in the major areas of business activity. Open to all students except majors in Business Administration and Economics.

200AB Principles of Accounting (3-3)

Foundations of modern accounting; books of account; transaction analysis, working papers; financial statements. Emphasis on assets, liabilities, ownership equity, revenues and expenses. Students may not earn credit for both Business 200AB and 202.

202 Survey of Accounting (4)

Fundamentals of accounting theory and practice; how accounting serves the individual, the business entity, and the broader disciplines of law, government, and economics. Students may not earn credit for both Business 200AB and 202.

204 The Consumer in the Market Place (4)

Marketing practices and policies of consumer goods industries. Applications of behavioral sciences in study of new products, advertising distribution policies, and other policies.

205 Foundations of Business Law (4)

Prerequisite: Sophomore standing. Development and function of common law, mercantile law, and the courts. Law contracts, agency, and sales.

209 Applied Business and Economic Statistics I (3)

Prerequisite: Knowledge of algebra or consent of instructor. Descriptive statistics with applications in business and economics; source, collection and presentations of data; frequency distribution; measures of location, variations, and other measures; index numbers; time series; business and economic indicators. Meets 5 hours weekly.

210AB Advanced Shorthand and Transcription (3-3)

Prerequisites: Business 102B and 103C or equivalent. Development of dictation and transcription skills to the student's maximum potential; emphasis on mailable transcripts. Dictation speeds of 100 words a minute required to complete 210A, and 120 for 210B.

212 Office Calculating Machines (3)

Development of usable skill in the operation of various types of office computing machines, including adding machines, key-driven, rotary, and printing calculators.

213 Typewriting Production Applications (4)

Prerequisite: Business 102B or equivalent. Applied typewriting techniques and production; word processing and reproduction applications. Lecture 2 hours, activity 4 hours.

294 Business Computer Systems (4)

Prerequisite: For Business or Economics majors, Business 209; for others, consent of instructor. Computer system fundamentals; flowcharting; programming in BASIC and COBOL; use of batch and terminal systems for statistical and other business data processing.

*Upper Division Courses***300 Managerial Accounting (4)**

Prerequisite: For Management Science or graduate students, Business 202; for others, Business 200AB. Uses of accounting and related data in operation and control.

301 Administrative Communications (4)

Communication in the organizational context of a managerial tool. Factors in channel selection. Techniques of oral and written communication. Preparation of memos, brief reports, press releases, minutes, letters, and oral presentations.

303 Business Finance (4)

Prerequisite: Business 200AB. Financial principles and practices related to business corporations. Financial promotion, types of securities, capitalization, expansion, and reorganization; securities markets; sources and uses of financial information.

304 Principles of Marketing (4)

Organization and operation for distribution of goods and services to all sectors of economy. Marketing methods pertinent to manufacturers, primary producers, wholesalers, retailers, and cooperative institutions.

305 Commercial Law (4)

Prerequisite: Four units of Business Law. Partnerships, corporations, negotiable instruments, bailments and personal property, suretyship, insurance.

306 Introduction to Management Science (4)

Prerequisites: Business 209 and Mathematics 240AB. Analysis and applications of concepts and techniques of the quantitative approach, systems analysis, and operations analysis to managerial functions, with emphasis on production.

307 Management and Organizational Behavior (4)

Analysis of management process with emphasis on business environment. Interpersonal and intergroup processes and relationships in organizations.

308 Business Responsibilities in Society (4)

Introduction to businessman's responsibilities and obligations in contemporary society. Principles and problem-solving techniques as related to major social problems confronting business organizations.

309 Applied Business and Economic Statistics II (3)

Prerequisites: Business 209 and Mathematics 240AB or equivalent. Statistical inference emphasizing application to business and economic decision-making; concept and calculus of probability; sampling and sampling distributions; estimation and significance tests; regression and correlation analysis; non-parametric methods. Meets 5 hours weekly.

311 Administrative Secretarial Procedures (4)

Prerequisites: Business 102B, 210B and 213 or equivalent skills including shorthand dictation speed of 100 wpm for 3 minutes with 95% accuracy. Secretarial skills at professional level; role of administrative secretary, problem solving, secretarial duties, use of dictating and transcribing machines, effective office relations.

313 Office Organization and Management (4)

Relation of office service functions to business enterprise; office organization, management, and functions; work of information handling; planning, controlling, organizing, and actuating in office management.

320A Intermediate Accounting I (4)

Prerequisites: Business 200AB or consent of instructor. Accounting theory and practice relating to problems of asset valuation and classification, in accounts and statements.

320B Intermediate Accounting II (4)

Prerequisite: Business 320A. Valuation and classification of liabilities and stockholders' equity; study of selected contemporary accounting issues.

321 Tax Accounting I (4)

Prerequisite: Ten units of accounting. Statutes, regulations, administrative rulings, and court decisions relating to federal and California income taxes of individuals.

330 Credits and Collections (4)

Business and social functions of credit, classifications of credit and credit instruments, investigation and analysis of credit risks, management and control of credit-collection processes.

331 Financial Institutions and Markets (4)

Prerequisites: Business 303 and Economics 201A. Characteristics, functions, and operations of financial institutions in money and capital markets; planning, procuring, and administering assets of banking and non-banking financial institutions.

332 Investments (4)

Prerequisite: Business 303. Principles of investment, survey of corporate securities, basic risks of investment, individual and institutional programs, principles of investment analysis, and selection of stocks and bonds.

333 Commercial Banking: Principles and Practices (4)

Prerequisite: Upper division standing; Business 303 or Economics 303 recommended. Survey of organization, operation, and management of commercial banks; sources and uses of bank funds, bank portfolio structure, credit analysis, lending, administration of trust funds.

335 Risk Management and Insurance (4)

Insurance as an economic and business institution; survey of fire, casualty, and life insurance for those interested as potential consumers or as a career.

336 Property and Liability Insurance (4)

Prerequisite: Business 335. Property and liability risks for individuals and business. Functional operations of insurers.

338 Real Estate Principles (4)

Introduction to economics of land ownership and use; fundamentals of ownership, financing, appraisal, management and transfer of residential and other real property.

339 Real Estate Practice (4)

Prerequisite: Business 338 or consent of instructor. Procedures, methods, standards, and ethics of real estate business; emphasis upon function of broker and real estate seller.

340 Principles of Advertising (4)

Prerequisite: Business 304 or consent of instructor. Marketing and economic functions of advertising. Survey of roles played by clients, agencies, advertising departments, media, and auxiliary organizations in field.

341 Selling and Sales Administration (4)

Prerequisite: Business 304 or consent of instructor. Fundamentals of selling and sales management; concentration on sales techniques with student presentations of critiques and analyses; procedures for selection, training, compensation and supervision of sales personnel.

342 Consumer Behavior (4)

Prerequisite: Business 304. Reactions of consumer to promotional activities of retailers; concepts of consumer strategy and tactics; importance of product image, brand, package influence, store image in influencing consumer purchases.

343 Principles of Transportation (4)

Economic significance of rail, bus, truck, air, and inland waterway transportation; problems of rate structures, regulation and finance of transportation systems.

344 Principles of Retailing (4)

Nature and importance of retailing. Functions of buying, stock planning, inventory control, markup, stock control, pricing, style merchandising, advertising, and personnel; emphasizes store location, store layout, departmentalization and management control.

345 Marketing and Physical Distribution (4)

Prerequisite: Business 304. Interaction of marketing and physical distribution; definition and characteristics of middlemen; distribution channels and exchange action; inventory concept, total cost concept.

346 Marketing of Services (4)

Prerequisite: Business 304 or consent of instructor. Marketing of services including promotion and pricing practices and strategies; practices of franchising and specific services sectors.

347 International Business (4)

Business conducted within a world environment; transactions comprising international business. Institutional setting abroad; scope of managerial decision-making in international business operations.

348 Commercial Transportation (4)

Prerequisite: Business 304. Practice of industrial traffic management, including documents, tariffs and regulations in solving shipping problems.

381 Real Estate Law (4)

Prerequisites: Business 338 and four units of Business Law or consent of instructor. Legal aspects of real property ownership and management; emphasis on California law affecting escrows, contracts, licensing, brokerage, co-ownership, deeds, conveyances, trust deeds, mortgages, titles, encumbrances, estates in land, and leases.

391 Quantitative Methods in Business and Economics (4)

Prerequisite: Business 309 or equivalent. Introduction to optimization techniques used in business administration; elements of quantitative decision theory applied to business problems. Annuities with special application to cost of capital investment.

395 Community Service in Business (1-3)

Prerequisites: Junior standing in Business, approval of school interdisciplinary faculty coordinator in consultation with EPIC director, and acceptance by an appropriate community agency, or director of a campus-approved business assistance or development project. Participation in work of a community agency, or activities in business assistance or development projects, utilizing professional and/or vocational skills in service to community. May be repeated to maximum of 6 units. Graduate CR/NC only.

401 Administrative Business Reports (4)

Prerequisite: Senior or graduate standing in Business or Economics. Organization and preparation of reports as used in business, education, and government; techniques of collecting, interpreting, and presenting information; study of actual reports.

409 Advanced Applied Business and Economic Statistics (4)

Prerequisite: Business 309. Additional techniques of inference statistics; theory and use of estimation and testing of hypothesis procedures for: variances, multi-variate regression and correlation analysis, analysis of variance, chi-square. Innovations in time series analysis.

410A Problems of Business Education I (3)

Prerequisite: Completion of all lower division Business course requirements. History and philosophy of education for business, including aims, scope, organization, and administration; study of current business-education concepts, issues, and trends on secondary and collegiate levels.

410B Problems of Business Education II (3)

Prerequisite: Business 410A. Programs, equipment, layout, and materials for business training; opportunity to learn how to plan, to carry out plans, and to evaluate; modern trends in business; motivational devices.

412 Office Systems and Procedures (4)

Prerequisite: Business 313. Functions and responsibilities of administrative systems department in relation to work simplification programs and techniques, major and minor systems studies, work measurement programs, business machines and technology, word processing systems.

414 Records Management (4)

Prerequisite: Business 313. Principles of records creation, retention, transfer, and disposal. Organization and management of stored records. Coding, microfilming, and retrieval of information. Use of manual, mechanical, and computer means of storing and retrieving information.

415 Proseminar: Microform Systems (2)

Prerequisites: Business 413 and 414. Hardware, processing methods, microforms, systems design and analysis, COM (Computer Output Microfilm), business applications, case histories.

416 Proseminar: Business Forms Design and Control (2)

Prerequisites: Business 413 and 414. Principles of design, production, and control of business forms necessary for manual and automated business systems.

419 Office Simulation (4)

Prerequisites: Business 102B or equivalent; 313, 413, and 414. Office simulation in which students rotate through a variety of positions providing synthesis of knowledge and skills required in office operations and supervision.

420A Advanced Accounting II (4)

Prerequisite: Business 320AB. Financial statement analysis; changes in financial position; accounting problems relating to tax allocation, price level changes, consignments, installment sales, estates and trusts, fund accounting.

420B Advanced Accounting II (4)

Prerequisite: Business 420A. Problems associated with preparation of consolidated financial statements; includes intercorporate affiliations, intercompany investments and other transactions, minority interest, foreign branches, and foreign subsidiaries.

421 Tax Accounting II (4)

Prerequisite: Business 321. Statutes, regulations, administrative rulings and court decisions relating to federal and California income taxes of partnerships, corporations, estates and trusts; estate and gift tax matters, and procedural problems.

422A Cost Accounting I (4)

Prerequisite: Business 300 or 320A. Nature and control of costs; costing methods; job order and standard costs, joint and by-product costs, direct vs. full costing; cost allocation, cost-volume profit analysis, analytical cost reports.

422B Cost Accounting II (4)

Prerequisite: Business 422A. Additional topics in cost accounting; budgeting, responsibility accounting, relevant analysis, capital budgeting, inventory planning and control, performance measurement, transfer pricing, and related topics.

423 Financial Accounting Theory (4)

Prerequisites: Business 420A and 3.0 g.p.a. in accounting courses. Evolution of financial accounting theory and practice; survey of contemporary accounting field, with emphasis on latest developments and issues.

424A Auditing I (4)

Prerequisite: Business 320B. Audit functions of the Certified Public Accountant. Nature of audit evidence, audit procedures, audit work papers, audit reports, evaluation of internal controls and internal auditing.

424B Auditing II (4)

Prerequisite: Business 424A. In-depth study of generally accepted auditing standards; application of statistical sampling to auditing; problems involved in audit of computer-based accounting records.

426 Problems in Accounting Theory (6)

Prerequisite: Thirty-two units of accounting. Advanced accounting theory and problems on a level encountered by the practicing Certified Public Accountant and by those preparing for the Uniform CPA Examination.

427 Governmental and Institutional Accounting (4)

Prerequisite: Business 200B or 202. Principles and problems of fund accounting for governments and nonprofit institutions. Budgets, revenues, expenditures, tax levies, appropriations, general fund, special funds, financial reports. Separate treatment of local, state, and federal government agencies.

428 Internal Auditing (4)

Prerequisite: Business 424A. Establishment of an internal audit organization; staff selection and development; planning and controlling the audit; development of facts and supporting evidence; sampling plans and procedures; computer audits; preparation of oral and written reports.

430 Case Study in Commercial Bank Administration and Policies (4)

Prerequisites: Upper division standing; Economics 303, Business 333 or equivalent. Analysis of cases and problems concerning administration and policies of commercial banks. Credit extension, handling of cash and reserve positions, management of securities portfolios and assets under trust agreements, methods of long-range profit planning. Emphasis on recent innovations, current problems, prospective developments.

432 Real Estate Management (4)

Prerequisite: Business 338 or consent of instructor. Management of real property as a part of the real estate industry; nature, functions, scope of management principles, services, property care, tenant relations, records.

433 Budgeting (4)

Prerequisites: Business 300 and 303. Principles and techniques involved in the formulation, enactment, and administration of the budget; relation of budget practices to scientific management in business; budget reports for analysis and control.

434 Financial Management (4)

Prerequisite: Business 303. Case studies of problems in planning, procuring, and maintaining optimum distribution of financial resources of business organizations. Applications of principles used in financing of industrials, utilities, trading enterprises, and selected financial institutions.

435 Life, Health and Group Insurance (4)

Prerequisite: Business 335. Review of policies, contracts, premium determination, and reserves; analysis of group life and health insurance.

436 Business Risk Management (4)

Prerequisite: Business 336. Negligence liabilities and related business risk problems. Workmen's Compensation, surety and fidelity, crime and peril, and their usefulness as tools of the business risk manager.

437 Securities Analysis (4)

Prerequisite: Business 332 or consent of instructor. Investment practice in analysis of financial statements; selection and valuation of stocks and fixed-income securities, stockholder-management relations, applied securities analysis.

438A Real Estate Valuation I (4)

Prerequisite: Business 338 or consent of instructor. Determining real property values, purposes of appraisals, analysis of factors involved and their relationship to trends in property values, current appraisal theory. Emphasis on residential properties.

438B Real Estate Valuation II (4)

Prerequisite: Business 438A. Application of principles and techniques in planning and performing real property appraisal projects, including the detailed appraisal report. Emphasis on complex residential and investment and income properties.

439 Real Estate Finance (4)

Prerequisite: Business 338 or consent of instructor. Position of real estate finance in the economy. Techniques and procedures used in financing real property, including sources of funds, lending policies, and instruments used in California today.

440 Advanced Advertising (4)

Prerequisite: Business 340 or consent of instructor. Advertising as a marketing promotional medium. Analysis of factors constituting good advertising and coordination of these factors through case studies.

441 Industrial Marketing (4)

Prerequisite: Business 304. Analysis of various types of industrial goods and markets for them, including government agencies; product planning; marketing research; determination of marketing channels; pricing policies; sales promotion; and cost distribution.

442 Marketing Management (4)

Prerequisite: Business 304 or consent of instructor. Intensive study of marketing management, with emphasis on marketing environment. Development of marketing strategies and formulation of policies; integration of marketing with other functional areas of business through case studies.

443 Marketing in a New Business (4)

Prerequisite: Business 304 or consent of instructor. Introduction of a new business or product concept into marketplace. Emphasis on small business marketing entrepreneurship.

445 Public Relations Methods for Business (4)

Prerequisite: Business 304 or consent of instructor. Public relations policies and techniques for business enterprises; development of good relationships with customers, employee, stockholder, government, and general public. Role of research, publicity, and mass media in public relations.

446 Marketing Research Problems (4)

Prerequisite: Business 304. Marketing research functions and procedures utilized in measuring and analyzing environmental factors in consumer demand, sales efficiency, effectiveness of promotional programs and effects of competitor's strategies; methods of product, distribution, and pricing research. Projects emphasize current marketing research techniques.

447 International Marketing Management (4)

Prerequisite: Business 304. Management of international marketing operations, including product policies, pricing, advertising, distribution channels, and marketing research. Factors governing the decision to engage in foreign selling or buying transactions.

448 Seminar in Modern Transportation (4)

Prerequisite: Business 304 or consent of instructor. Theory of transportation operation and economics; current issues and developments in field, including rapid transit, urban and national transportation problems.

449 Physical Distribution Management (4)

Prerequisite: Business 304 or consent of instructor. Management of physical supply and distribution. Integrates traditional and modern concepts of traffic management. Deals with facilities, inventories, scheduling, allocation, warehousing, traffic, and cost trade-offs.

450 Seminar in Transportation Regulations (4)

Prerequisite: Business 304. Transportation regulations, including bases, history, and case studies of leading litigation testing transportation regulatory acts.

454 Special Topics in Business (4)

Prerequisite: Varies with topic; see *Schedule of Classes* for specific prerequisite. In-depth presentation and analysis of topics significant to contemporary business world; lectures, discussions, speakers, research projects.

460 Case Studies in Business Management (4)

Prerequisite: Business 306 or equivalent. Analysis of factory management, including such topics as industrial standards, schematic and quantitative models, organizing and controlling production, programming aggregate rates of production, inventory control and production scheduling. Undergraduate seminar.

461 Management Theory and Practice (4)

Prerequisite: Business 307. Development of the theory of management through analysis and integration of fundamental relationships and principles. Current and past practices are analyzed in planning, organizing, directing, and controlling. Undergraduate seminar.

462 Comparative Management (4)

Prerequisite: Senior or graduate standing, or prior consent of instructor. Identification and analysis of management systems in differing national, functional, or institutional settings. Impact of economic, social, political, and cultural variables on management systems. Universality of management principles.

463 Motion and Time Study (4)

Prerequisites: Business 309 and 460. Quantitative aspects of scientific management, including elements of motion economics, operation analysis, flow process charts, time study with an introduction to methods-time measurement (written reports in these areas).

464 Production and Material Control (4)

Prerequisite: Business 460 or equivalent. Production planning and budgeting; development of production control systems, including product development, materials control, plant and equipment analysis, production standards and methods, personnel and supervision, controls, production, and efficiency measurements.

465 Purchasing Management (4)

Prerequisite: Business 306. Analysis and application of purchasing principles and procedures. Organization of purchasing departments and relation to other departments. Criteria for make-or-buy; supplier selection; quality, value, and cost analysis; supplier negotiations.

467 Quality Control (4)

Prerequisite: Business 309 or equivalent. Control of quality of manufactured products by statistical methods; control charts for variables, fraction defective, defects per unit. Acceptance sampling; single, double, and multiple sampling methods; sampling tables.

468 Small Business Management (4)

Prerequisite: Majority of core courses completed or consent of instructor. Use of case study method to investigate and analyze problems related to plant location, labor relations, organization control, finances, taxation and others of interest to small business entrepreneur.

469 Experimental Design and Analysis (4)

Prerequisite: Business 306 or consent of instructor. Research methodology and techniques in business, including experimental design, scientific thinking, and analysis of data. Undergraduate seminar.

470 Managerial Leadership and Motivation (4)

Prerequisite: Business 307 or Nursing 380, or consent of instructor. Nature, resources, strategies, and models of complex organizations; case analyses of process of managerial leadership, motivation, interpersonal relationship in work groups; impact on organizational effectiveness.

472 Labor Relations and Collective Bargaining (4)

Prerequisite: Economics 302. Relations between employers and employees as the latter are represented by organized labor. Collective bargaining as it relates to recognition, wages, hours, working conditions, grievance procedure, seniority, health and safety.

473 Personnel Management (4)

Prerequisites: Business 306 and 307 or consent of instructor. Principles, methods and procedures in effective utilization of human resources. Development and objectives of personnel management, labor budgeting, job analysis, recruitment, selection, placement, training, wage and salary administration, working conditions.

474 Wage and Salary Administration (4)

Prerequisite: Business 473. Theory and practices of wage and salary administration: job analysis and preparation of job descriptions, use of job evaluation scales, establishment of pay systems, performance appraisal, and additional compensation techniques.

475 Cases in Personnel Management (4)

Prerequisite: Business 473; courses in psychology, sociology, and labor economics recommended. Application of principles and methods of personnel management to specific cases, with view to developing proficiency in dealing with issues in personnel procurement, development, compensation, integration, and maintenance.

477 Business Policy (4)

Prerequisite: Senior standing. Integration of principles and policies of business management from all fields of business administration. Emphasis on interaction of disciplines in efficient administration of problems and establishment of policies.

479 Seminar: Business in Its Social Setting (4)

Prerequisite: Business 308 or graduate standing. Analytical interdisciplinary investigation of evolution and contemporary status of business relative to changing dynamic forces: social, political, legal, economic.

480 Advanced Business Law (4)

Prerequisite: Eight units of business law. Advanced problems of contracts, agency sales, negotiable instruments, partnerships, corporations, bailments and personal property, trusts and probate, suretyship and insurance, with emphasis on legal problems encountered in public accounting practice.

481 Introduction to Business Information Systems (4)

Prerequisites: Business 294, 304, and 300 or 320A. Accounting systems and their relationships to other information systems; information system flowcharting; experience in using a financial planning language; introduction to managing quality, cost, security, data processing, communications, and design of information systems.

482 Basic Information Systems Design (4)

Prerequisite: Business 294 or equivalent. Basic techniques for design of information systems; computer hardware and software needed in computer-based systems; use of COBOL; system-design project in COBOL.

483 Advanced COBOL Programming (4)

Prerequisite: Business 482 or equivalent. Structure of COBOL; advanced COBOL theory, practice, and problems; options such as report writer, table handling techniques, file organization and maintenance, direct access techniques; programming graphics and standards; comparison to other procedural languages. Case studies and supervised individual projects.

484 On-Line Systems (4)

Prerequisite: Business 482. Introduction to planning and development of on-line business information systems; integrated planning of systems hardware and software to meet expected uses of a time-sharing or batch system on cost-effective basis.

485 Case Studies in Profit Sharing and Pension Plans (4)

Prerequisites: Business 435 or equivalent and upper division standing. Intensive case studies of basic principles and practice of group life insurance. Analysis of types of coverage available for the protection of individuals and businesses, including profit sharing plans, tax deferred annuities, key man life insurance.

486 Managing Information Systems Support (4)

Prerequisites: Business 481 and 482. Effective techniques in managing data processing operations and information systems development.

487 Introduction to Strategic Information Systems (4)

Prerequisites: Business 294 and 306 or 391. Design of information systems that support strategic planning activities, including simulation programs and languages, optimization programs, and programs that facilitate decision analysis.

488 Advanced Information Systems Design (4)

Prerequisites: Business 481 and 482. Planning and development of integrated management information systems. Data base design, data management systems, operating systems, standards and documentation, data security, performance evaluations; monitoring, hardware, and economics of integrated systems.

490 Survey of Data Processing (4)

Prerequisite: Business 313. Fundamental operations concerning business data processing. Primarily for business teachers and others who want an overall survey of the field. Applications of computer data processing, data representation, programming, systems analysis.

491 Sampling Theory and Techniques in Research (4)

Prerequisite: Business 309 or consent of instructor. Techniques for conducting quantitative research in business, economics and related fields through sampling; theory of sampling designs and methodology in framework of complete process for conducting a study.

496A Operations Research I (4)

Prerequisite: Business 306 or consent of instructor. Evaluation and application of linear programming and operations analysis as a tool for management decision-making at top executive level.

496B Operations Research II (4)

Prerequisite: Business 496A. Emphasis on probability distribution, feedback theory, and simulation. Undergraduate seminar.

499 Undergraduate Directed Study (1-4)

Prerequisite: Senior standing and consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare oral and written reports. Project to be selected in conference with sponsor before registration; progress meetings held regularly.

Chemistry

In School of Letters and Science

The Department of Chemistry offers undergraduate programs leading to the Bachelor of Science degrees in Chemistry and Biochemistry, and the Bachelor of Arts degree in Chemistry. The Master of Science degree program is described in the *Graduate Programs* section.

The Faculty

Professors: Anthony J. Andreoli, Joseph Casanova, Jr., Douglas L. Currell, Lloyd N. Ferguson, Anthony Fratiello, David M. Frisch, Harold Goldwhite (Chairperson), Sigmund Jaffe, Stewart A. Johnston, Richard T. Keys, Thomas P. Onak, Stanley H. Pine, Rashad E. Razouk, John R. Spielman.

Associate Professors: Joseph Bragin, Costello Brown, Hendrik Keyzer, Donald R. Paulson.

Assistant Professor: Kenneth A. Devor.

Undergraduate Programs

Students who expect to earn a bachelor's degree in Chemistry in the minimum time should include chemistry, physics, German, geometry, trigonometry and algebra (two years) in their high school preparation.

For Chemistry majors, only courses with a grade of C or better in the major program are credited toward the degree. Students having credit for community college Organic Chemistry have the option of earning credit by examination in Chemistry 301A and 302A. In the programs described below, Chemistry 102, 103 and 201 may be substituted for Chemistry 122 and 123. One year of German is required for all degrees.

Departmental Honors Program

A Departmental Honors Program in Chemistry is offered for students who possess a minimum grade point average of 3.0 in all college work and in Chemistry, averaged separately, and who are recommended in writing by two members of the faculty.

The program is designed to encourage independent study and to provide an introduction to research. The traditional curriculum is enriched by the selection of electives which provide depth in areas outside the field of Chemistry.

Honor students are assisted by an honors adviser in planning their programs. Enrollment in the Honors Study in Chemistry course (Chemistry 396) and a written thesis are required parts of the program. Diplomas and transcripts of Honors Program graduates are designated: "*Graduated with Departmental Honors in Chemistry.*"

Bachelor of Science Degree in Chemistry

The Bachelor of Science program in Chemistry, requiring 198 quarter units, is designed to fit the needs of those who plan to do graduate work or complete their formal education with the bachelor's degree, which is accredited by the American Chemical Society.

Requirements for the Major

A total of 111–113 units in Chemistry and related fields is required.

Lower Division

Required Courses (57–59 units):

In Chemistry:

101 General Chemistry I (5)

122–123 Principles of Chemistry (5-5)

In Physics:

201–06 General Physics (4-4-4-4-4-4)

In Mathematics:

206–09 Calculus, I, II, III, IV (4-4-4-4)

Select one of following:

255 Introduction to Matrix Theory (4)

290 Digital Computer Programming (2)

Upper Division

Required Courses (47 units):

In Mathematics:

302 Differential Equations for Engineers and Physicists (4)

or

401 Differential Equations (4)

In Chemistry:

301ABC Organic Chemistry (3-3-3)

302ABC Organic Chemistry Lab (2-2-2)

401–03 Physical Chemistry I–III (4-4-4)

412AB Physical Chemistry Lab (3-3)

418 Inorganic Chemistry (4)

462 Analytical Chemistry (6)

Electives in Chemistry (7 units):

Select with approval of adviser.

Bachelor of Science Degree in Biochemistry

The Bachelor of Science Degree in Biochemistry is designed to fit the needs of those who plan either to complete their formal education with the bachelor's degree and obtain positions in scientific and industrial laboratories, or do graduate study in Biochemistry. A total of 198 units is required for the degree.

Requirements for the Major

A total of 116 units in Chemistry and related fields is required for the major.

Lower Division

Required Courses (65 units):

In Chemistry:

- 101 General Chemistry I (5)
- 122–123 Principles of Chemistry (5-5)

In Physics:

- 201–04 General Physics (4-4-4-4)

In Mathematics:

- 206–09 Calculus I, II, III, IV (4-4-4-4)

In Biology:

- 101 Biology of Animals (5)
- 102 Biology of Plants (5)

Microbiology:

- 200AB General Microbiology (5-3)

Upper Division

Required Courses (40 units):

In Chemistry:

- 301ABC Organic Chemistry (3-3-3)
- 302AB Organic Chemistry Lab (2-2)
- 401 Physical Chemistry I (4)
- 402 Physical Chemistry II (4)

or

- 403 Physical Chemistry III (4)
- 431ABC Biochemistry (3-3-3)
- 432AB Biochemistry Lab (2-2)

In Physics:

- 443AB Biophysics (3-3)

Electives in Biology (11 units):

Select from upper division courses.

Bachelor of Arts Degree in Chemistry

The Bachelor of Arts degree program, which requires 186 units, is designed for those who want a liberal education with a major in Chemistry.

Requirements for the Major

A total of 93–95 units is required for the major. Those wishing to fulfill the minimum requirements of the American Chemical Society must elect one additional upper division laboratory course in Chemistry.

Lower Division

Required Courses (61–63 units):

In Chemistry:

- 101 General Chemistry I (5)
- 122–123 Principles of Chemistry (5-5)

NOTE: Chemistry 101, 102, 103, 201 may be substituted for 101, 122, 123.

- 208C Bio-Organic Chemistry III (4)

In Physics:

- 201–04 General Physics (4-4-4-4)

In Mathematics:

- 206–09 Calculus I, II, III, IV (4-4-4-4)

In Geology:

- 150 Physical Geology (4)

In Geology or Physics:

Select at least 6 units from following:

- Geology 201–02 Mineralogy and Crystallography I, II (3-3)

- Physics 205–06 General Physics (4-4)

Upper Division

Required in Chemistry (32 units):

- 301ABC Organic Chemistry (3-3-3)
- 302AB Organic Chemistry Lab (2-2)
- 401 Physical Chemistry I (4)
- 402 Physical Chemistry II (4)
- 412A Physical Chemistry Lab (3)
- 418 Inorganic Chemistry (4)
- 480 History of Chemistry (4)

The Credential Program

The Bachelor of Arts degree program in Chemistry has not been submitted for approval for examination waiver for the single subject credential in Physical Science. Students should consult advisers in the department and in the School of Education.

Courses of Instruction

Lower Division Courses

A grade of C or better is required in all prerequisite courses.

101 General Chemistry I (5)

Prerequisites: High school chemistry and physics; two years of high school algebra; satisfactory performance on mathematics placement examination, given during registration period. Physical concepts, stoichiometry, structure of atom, periodic table, chemical bonding. Lecture 3 hours, recitation 1 hour, laboratory 3 hours.

102 General Chemistry II (5)

Prerequisite: Chemistry 101. Structure of molecules, states of matter, acids and bases, equilibrium. Lecture 3 hours, recitation 1 hour, laboratory 3 hours.

103 General Chemistry III (5)

Prerequisite: Chemistry 102. Thermodynamics, electrochemistry, kinetics, and special topics in general chemistry. Lecture 3 hours, recitation 1 hour, laboratory 3 hours.

122-123 Principles of Chemistry (5-5)

Prerequisites: Superior performance in Chemistry 101; Mathematics 206. Introduction to fundamental chemical principles, with emphasis in laboratory on quantitative work. Lecture 3 hours, recitation 1 hour, laboratory 3 hours.

151 Fundamentals of Chemistry I (5)

Prerequisites: One year of high school algebra and satisfactory performance on mathematics placement examination, given during registration period. Introductory course in fundamental laws and theories of general chemistry. May not be taken for credit by Chemistry or Physics majors. Lecture 3 hours, recitation 1 hour, laboratory 3 hours.

152 Fundamentals of Chemistry II (Organic) (5)

Prerequisite: Chemistry 151. Introduction to organic chemistry. May not be taken for credit by Chemistry or Physics majors. Lecture 3 hours, recitation 1 hour, laboratory 3 hours.

153 Fundamentals of Chemistry III (Biochemistry) (5)

Prerequisite: Chemistry 152. Introduction to biological chemistry. May not be taken for credit by Chemistry or Physics majors. Lecture 3 hours, recitation 1 hour, laboratory 3 hours.

155 Language of Chemistry (4)

Prerequisites: One year of high school algebra; satisfactory performance on a placement test. Development of basic skills for further training in chemistry. Introduction to stoichiometry; meaning of chemical equations and their algebraic interpretation; physical background of fundamental chemical concepts. Not applicable for credit toward major in science; not acceptable as prerequisite for Chemistry 102 or 152. Lecture 3 hours, recitation 1 hour.

158 Chemistry and Survival (4)

Chemical dependence of life; processes related to human survival.

201 Quantitative Analysis (5)

Prerequisite: Chemistry 103. Principles and techniques of analytical chemistry, including stoichiometry, equilibrium (pH and redox), electrochemistry, spectroscopy and separations. Lecture 3 hours, laboratory 6 hours.

208A Bio-organic Chemistry I (4)

Prerequisite: Chemistry 102. Chemistry of carbon compounds, including compounds of biological importance. Not open to B.S. degree chemistry majors; not recommended for pre-medical students. Lecture 3 hours, recitation-laboratory 3 hours.

208B Bio-organic Chemistry II (4)

Prerequisite: Chemistry 208A. Chemistry of natural products and their relation to biological systems; introduction to biochemical processes. Not open to B.S. degree chemistry majors. Lecture 3 hours, recitation-laboratory 3 hours.

208C Bio-organic Chemistry III (4)

Prerequisite: Chemistry 208B or 301C. Biologically important compounds and their roles in plant, animal, and microbial metabolism. Not open to B.S. degree chemistry majors. Lecture 3 hours, recitation-laboratory 3 hours.

254 Special Topics in Chemistry (1-4)

Prerequisite: As needed for specific topic. Current topics of interest in chemistry and related disciplines. Topics announced in *Schedule of Classes*. May be repeated to maximum of 8 units.

Upper Division Courses**301ABC Organic Chemistry (3-3-3)**

Prerequisite: Chemistry 123 or 201; 302A must be taken concurrently with 301A, 302B with 301B and 302C with 301C. Properties and reactions of aliphatic and aromatic compounds; emphasis on fundamental principles and reaction mechanisms.

302ABC Organic Chemistry Laboratory (2-2-2)

302A: Prerequisites: Chemistry 123 or 201 (201 may be taken concurrently); 301A must be taken concurrently. Fundamentals of organic laboratory analysis, with emphasis on spectroscopic methods. Recitation-laboratory 6 hours.

302B: Prerequisites: Chemistry 302A; 301B must be taken concurrently. Fundamental laboratory techniques of organic chemistry and organic synthesis. Recitation-laboratory 6 hours.

302C: Prerequisites: Chemistry 302B; 301C must be taken concurrently. Application of organic laboratory techniques to selected organic syntheses. Recitation-laboratory 6 hours.

395 Community Service in Chemistry (1-3)

Prerequisites: Chemistry 123 or 201 and approval of departmental adviser. Voluntary participation in a community agency or activity using professional skills in chemistry. May be repeated to maximum of 6 units; maximum of 3 units applicable as elective for biochemistry or chemistry major. Graded CR/NC only.

396 Honors Studies in Chemistry (1-5)

Prerequisite: Participation in Honors Program in Chemistry, and Chemistry 301ABC; consent of an instructor to serve as research adviser; approval of Chemistry department honors adviser. Independent research in Chemistry and Biochemistry. Regular consultation with research adviser; written thesis required. Students must enroll for total of 5 units before submitting thesis and receiving grade.

401 Physical Chemistry I (4)

Prerequisites: Chemistry 123 or equivalent; Mathematics 209; and Physics 204. Kinetic theory of gases, thermodynamics, chemical statistics and phase equilibria.

402 Physical Chemistry II (4)

Prerequisite: Chemistry 401. Solutions, electrochemistry, chemical kinetics, and macromolecules.

403 Physical Chemistry III (4)

Prerequisites: Chemistry 123 or equivalent and Mathematics 302 or 401; Physics 206 recommended (may be taken concurrently). Molecular structure and spectroscopy. Fundamentals of quantum chemistry; applications to the chemical bond, spectroscopy and the solid state. May not be taken concurrently with Chemistry 401 or 402.

412AB Physical Chemistry Laboratory (3-3)

Prerequisite: Chemistry 401 or 403. Experiments in physical chemistry, including calorimetry, crystallography, electrochemistry, molecular spectroscopy and phase equilibria. Lecture 1 hour, laboratory 6 hours.

413 Intermediate Physical Chemistry (4)

Prerequisite: Chemistry 402. Selected topics in physical chemistry. May be repeated for credit to maximum of 12 units.

414 Chemical Thermodynamics (4)

Prerequisites: Chemistry 401, Mathematics 209 and Physics 204. Development of classical equilibrium thermodynamics from first principles, with emphasis on systems of chemical interest; theories of non-electrolyte and electrolyte solutions, introductions to non-equilibrium thermodynamics or statistical thermodynamics.

415 Chemical Kinetics (4)

Prerequisites: Chemistry 402 and Mathematics 302 or 401. Introduction to principles of chemical kinetics including theoretical development of rate equations, analysis of rate data and consequent kinetic implications of reaction mechanisms.

418 Inorganic Chemistry (4)

Prerequisite: Chemistry 402. Selected topics in inorganic chemistry, including physical inorganic chemistry, coordination chemistry, and inorganic polymers.

419 Inorganic Chemistry Laboratory (3)

Prerequisite: Chemistry 418 (may be taken concurrently). Laboratory work on preparation and investigation of various classes of inorganic compounds. Lecture 1 hour, laboratory 6 hours.

420 Advanced Organic Chemistry I (4)

Prerequisites: Chemistry 301C and 401 or 403. Theoretical aspects of organic chemistry, emphasizing reaction mechanisms.

422 Organic Analysis (4)

Prerequisite: Chemistry 302C. Methods of qualitative and quantitative analysis of organic compounds; includes modern instrumental techniques. Lecture 2 hours, laboratory 6 hours.

426 Advanced Synthetic Organic Chemistry (5)

Prerequisite: Chemistry 302C; Chemistry 412B recommended. Reactions and their mechanisms as used in modern synthetic organic chemistry; laboratory includes modern methods of synthesis coupled with use of modern instrumentation. Lecture 2 hours, recitation 1 hour, laboratory 8 hours.

431ABC Biochemistry (3-3-3)

Prerequisites: Chemistry 301C and 302B; Physics majors in the Biophysics option admitted by special permission. Lectures on chemistry and metabolism of carbohydrates, proteins, lipids, vitamins, hormones, and related phenomena in animals, plants, and microorganisms.

432AB Biochemistry Laboratory (2-2)

Prerequisites: Chemistry 301C and 302B and 431A. Chemistry 431B must be taken concurrently with Chemistry 432A. Recitation and laboratory experiments designed to illustrate chemical behavior of substances of biochemical importance. Recitation-laboratory 6 hours.

433 Clinical Biochemistry (3)

Prerequisites: Chemistry 431AB and 432A; Chemistry 431C may be taken concurrently. Lecture and laboratory study of chemistry of blood, urine, and other body fluids. Lecture 1 hour, laboratory 6 hours.

454 Special Topics in Advanced Chemistry (1-4)

Prerequisite: As needed for specific topic. Current topics of special interest in advanced chemistry and related disciplines. Topics announced in *Schedule of Classes*. May be repeated to maximum of 8 units.

462 Analytical Chemistry (6)

Prerequisite: Chemistry 402. Principles underlying chemical methods of analysis, with emphasis on aqueous and nonaqueous equilibria, complexones, coprecipitation, electrochemical and spectral phenomena, separations, sampling and statistical analysis of data. Lecture 3 hours, laboratory 8 hours.

480 History of Chemistry (4)

Prerequisites: Chemistry 103 and 208B, or equivalent. Development of chemical knowledge from chemical arts of antiquity through alchemy to twentieth century, emphasizing contributions to fundamental theory by Lavoisier, Dalton, Kekule, Van't Hoff, Rutherford.

499 Undergraduate Directed Study (1-5)

Prerequisites: 2.5 grade point average in chemistry courses or one advanced laboratory course elective, consent of an instructor to act as sponsor, ability to assume responsibility for independent work and to prepare written and oral reports. Independent research project selected in conference with sponsor before registration; progress meetings held regularly. May be repeated to maximum of 9 units.

Chicano Studies

In School of Letters and Science

The program in Chicano Studies is designed to develop a sense of identity for Chicano students through intensive study of the history, culture and achievements of this second-largest American ethnic group and through inquiry into contemporary life and problems. The program provides instruction not previously offered by traditional disciplines, specifically relating such subjects to the Chicano experience.

An increased awareness and interest are generated in all areas affecting Chicanos, with an expectation that research will be stimulated in areas identified as critical. Also, study of traditional disciplines is encouraged through combinations of the Chicano Studies major with a major in a conventional academic discipline. Graduates may enter careers in such fields as teaching, community development, public relations, foreign service, labor relations, social work, and urban research.

Students from other ethnic backgrounds may become better informed about Chicano culture through enrollment in Chicano Studies courses.

The Faculty

Associate Professor: Manuel De Ortega.

Assistant Professors: Jorge Illueca, Louis R. Negrete, Richard A. Santillan, Hector Soto-Perez (Acting Chairperson).

The Undergraduate Program

The program in Chicano Studies provides a Bachelor of Arts degree in Mexican American Studies, and a minor in Mexican American Studies for students who elect a major in another field.

The Bachelor of Arts degree is available in three options. Option I, the General Program is intended for students interested in a liberal arts education; Options II and III are specifically designed for students who are interested in the single subject credential in social science and the multiple subjects credential, respectively.

Students electing the major in Mexican American Studies are encouraged to complete an ancillary major or an additional concentration in a traditional, related academic discipline that will prepare for a specific career objective. Consultation with departmental adviser is essential, and approval is required for individual programs. Suitable concentrations may be selected from American Studies, Anthropology, Economics, English, Foreign Languages, Geography, History, Latin American Studies, Philosophy, Sociology, Speech Communication and Drama, as well as other fields less directly related.

Requirements for the Major

Option I, the General Program, requires a total of 52 units of which 16–24 are in lower division and 28–36 are in upper division courses. Option II for the single subject credential in social science requires a total of 78 units, of which 34–

38 are in lower division and 40–44 are in upper division courses. Option III for the multiple subjects credential consists of a total of 130 units, which includes a prescribed pattern of 62 units of general education courses and 68 units in Chicano Studies and related areas.

Option I: General Program

Lower Division

Required in Chicano Studies (16 units):

- 101AB Bilingualism, Biculturalism and the Chicano (4-4)
- 111AB Introduction to Chicano Culture (4-4)

Electives (0–8 units):

Select from following, with approval of adviser:

- 105 Economic and Political Power of the Chicano (4)
- 150 Chicano and Contemporary Politics (4)
- 201 Mexican Literature in Translation (4)
- 257 Folk Music Ensemble of Mexico (2)
- 258 Folk Dances of Mexico (1)

Upper Division

Required in Chicano Studies (16 units):

- 311 Chicano Cultural History (4)
- 410AB Psychology of the Chicano (4-4)
- 430 Chicano Political Behavior (4)

Electives (12–20 units):

Select upper division courses with approval of adviser.

Option II: Single Subject Credential in Social Science

Lower Division

Required in Chicano Studies (20 units):

101A or 101B Bilingualism, Biculturalism and the Chicano (4)

105 Economic and Political Power of the Chicano (4)

111AB Introduction to Chicano Culture (4-4)

200A or 200B Spanish for Chicanos (4)

Required in Related Fields (14 units):

Anthropology 250 Cultural Anthropology (6)

Geography 160 Physical Geography (4)

History 202A or B United States Civilization (4)

Elective in Related Field (0-4 units):

Select from following to meet prerequisites for upper division electives:

Psychology 150 Human Behavior (4)

Sociology 201 Introductory Sociology (4)

Upper Division

Required in Chicano Studies (24 units):

311 Chicano Cultural History (4)

410A or 410B Psychology of the Chicano (4)

430 Chicano Political Behavior (4)

444 History of the Chicano People (4)

470AB Educational Institutions of the Barrio (4-4)

Electives in Chicano Studies (8 units):

Select with approval of adviser.

Electives in Related Fields (8-12 units):

Select from following with approval of adviser:

American Studies 401

Anthropology 443, 461

History 470, 471, 472, 474, 478, 480

Political Science 404, 415

Psychology 412A, 422

Sociology 415, 422, 442, 460, 472

Speech Communication 489

Option III: Multiple Subjects Credential

BLOCK I: ENGLISH, COMMUNICATION

General Education Requirements (12 units):

In English:

150A or B Written Expression I, II (4)

250 Understanding Literature (4)

In Speech Communication:

150 Oral Communication (4)

Major Requirements: (20 units):

In English:

401 English Language in America (4)

430 Children's Literature (4)

In Speech Communication:

489 Intercultural Communication (4)

490 Studies in Children's Speech Arts (4)

Select one from following:

English 406 Advanced Writing (4)

or

English 410 Writing in the Schools (4)

BLOCK II: MATHEMATICS AND SCIENCE

General Education Requirements (18 units):

Mathematics 120AB Elementary Mathematics for Teachers (4-2)

A minimum of 12 units is required in science courses, including both a physical and a biological science. At least 8 units, including 1 unit of laboratory experience must be taken from the following: Astronomy, Biology, Chemistry, Geology, Microbiology, Physics

Major Requirements (12 units):

Select courses from following with attention to prerequisites and with no more than two courses from any one department: Mathematics, Biology, Chemistry, Geology, Microbiology, Astronomy, Physics, Geography 160, Anthropology 260, Psychology 201

BLOCK III: SOCIAL SCIENCES

General Education Requirements (20 units):

History 202A or B United States Civilization (4)

Political Science 150 Government and American Society (4)

Psychology 150 Human Behavior (4)

Select two from following:

In Chicano Studies:

111A or B Introduction to Chicano Culture (4)

150 Chicano and Contemporary Politics (4)

Major Requirements (16 units):

Select courses in Chicano Studies with approval of adviser.

BLOCK IV: HUMANITIES

General Education Requirements (11 units):

Art 351 Art Appreciation (3)

Music 150 Music in World Culture (4)

Philosophy 150 Philosophical Ideas (4)

Major Requirements (21 units):

In Art:

400 Development of Literacy in Visual Arts (4)

446 Art of Latin America (4)

In Music:

400 Development of Perception in Musical Arts (4)

458 Music of Latin America (3)

In Spanish:

Select 4 units at level appropriate to student's preparation.

Select from following repeatable courses to maximum of 3 units:

In Chicano Studies:

257 Folk Music Ensemble of Mexico (2)

258 Folk Dances of Mexico (1)

Minor in Chicano Studies

The minor in Chicano Studies consists of 32 units as follows:

Lower Division

Required in Chicano Studies (16 units):

101AB Bilingualism, Biculturalism and the Chicano (4-4)

111AB Introduction to Chicano Culture (4-4)

Upper Division

Required in Chicano Studies (8 units):

311 Chicano Cultural History (4)

430 Chicano Political Behavior (4)

Electives (8 units):

Select upper division courses with approval of adviser.

The Credential Programs

The Bachelor of Arts degree program in Mexican American Studies with Option II is intended for examination waiver for the single subject credential in social science. Option III is intended for examination waiver for the multiple subjects credential. The Department of Chicano Studies shares partial responsibility for the Bilingual/Crosscultural Specialist Credential. For detailed information on these credentials, students should consult advisers in the department and in the School of Education.

Courses of Instruction

Lower Division Courses

100 Introduction to College Environment (4)

Prerequisite: Consent of department. Discussion of learning techniques, academic skills and the role of the Chicano in contemporary society. Course primarily designed to familiarize Chicano Educational Opportunity Program students with the academic community. Graded CR/NC only.

101AB Bilingualism, Biculturalism and the Chicano (4-4)

Prerequisite: Consent of instructor. Potential problems and advantages of bilingualism and biculturalism in interest of more effective social and academic performance.

105 Economic and Political Power of the Chicano (4)

Prerequisite: Political Science 150. Analysis of existing and potential economic and political power of the Chicano in contemporary society.

111AB Introduction to Chicano Culture (4-4)

Introductory course examining development of Chicano culture from Pre-Columbian Mexico to present barrio culture.

150 Chicano and Contemporary Politics (4)

Internal barrio politics and external efforts to manipulate that system, with focus on Chicanos.

200ABC Spanish for Chicanos (4-4-4)

Prerequisite: Knowledge and use of Spanish as spoken in Southwestern United States. Phonetics, grammar and structure of local dialectal forms compared with standard Spanish; cultural and esthetic values of Spanish literature of Southwestern U.S.

201 Mexican Literature in Translation (4)

Introduction to literature of Mexico in translation from Spanish era through contemporary literature.

257 Folk Music Ensemble of Mexico (2)

Prerequisites: Knowledge of music preferred but not necessary, and consent of instructor. Ensemble performance of Mexican folk music, study of techniques and regional styles. Activity 4 hours. May be repeated to maximum of 6 units.

258 Folk Dances of Mexico (1)

Study and practice of step patterns and regional dance styles of Mexico. Activity 3 hours. May be repeated to maximum of 6 units.

Upper Division Courses

311 Chicano Cultural History (4)

Prerequisite: Chicano Studies 111AB. Development and nature of Mexican and Chicano culture, with emphasis on especially significant historical movements and their contribution to understanding current cultural problems.

395 Community Service in Chicano Studies (1-3)

Prerequisites: Eight units of approved Chicano Studies courses and approval by departmental faculty adviser in consultation with EPIC director and acceptance by community agency. Participation in work of community agency or activity utilizing professional and/or vocational skills in service to community. Graded CR/NC only. Credit limited to 6 units maximum toward B.A. degree.

400 Pre-Columbian Literature of Mexico (4)

Prerequisite: Chicano Studies 111AB or 201. Literary works of Mayan, Nahua, and other pre-Columbian peoples of Mexico, with emphasis on structural and esthetic elements, history of thought and world view.

410AB Psychology of the Chicano (4-4)

Prerequisite: Psychology 150, or consent of instructor. Value systems and institutions of Chicano culture and personality types produced. Acculturation, identity, and relationships with other cultures.

430 Chicano Political Behavior (4)

Prerequisite: Chicano Studies 150. An analysis of socioeconomic and political factors which provide formative framework for unique political behavior patterns characteristically existing in the Chicano community.

440 Development of Spanish Language in Southwestern U.S. (4)

Prerequisite: Spanish 200C or equivalent. Conducted in Spanish. Origin, development, and present characteristics of Spanish language as used in southwestern United States. Emphasis on linguistic contributions of various antecedent and contemporary cultures in this area.

444 History of the Chicano People (4)

Prerequisite: History 202A or B; Chicano Studies 150 recommended. Background and development of the Chicano from pre-Columbian times and settlement of Southwest, with emphasis on period from 1848 to present.

446 Folkloric Dance: Living History of Mexico and the Southwest (4)

Prerequisite: Chicano Studies 111AB; 258 recommended. Folkloric dance as it reflects historical and ethnic experiences of people in Mexico and southwestern United States.

450 Advocacy Research for Community Problems (4)

Prerequisites: Chicano Studies 410A and 430 or 470A; background in statistics desirable. Introduction to advocacy research, emphasizing special problems of Spanish-speaking who live in socioeconomically depressed areas. Includes design and writing of research proposals dealing with contemporary community problems.

470AB Educational Institutions of the Barrios (4-4)

Prerequisite: Chicano Studies 150, or consent of instructor. Barrio educational programs and organizations, and an analysis of their effectiveness in solving socioeconomic problems. Recommended for students working toward teaching credential.

490 Special Studies (1-4)

Prerequisites: Upper division or graduate standing and permission of instructor. Intensive study of selected areas in Chicano Studies. May be repeated for credit to maximum of 8 units.

499 Undergraduate Directed Study (1-4)

Prerequisites: Eight units in Chicano Studies; a g.p.a. of 2.75; upper division or graduate standing; full-time faculty member as sponsor; and recommendation of department chairman. A project selected in conference with sponsor, progress meetings to be held regularly and final report submitted. May be repeated to maximum of 8 units.

Child Development

In School of Fine and Applied Arts

The interdisciplinary program in Child Development is designed particularly for persons planning to participate in services to young children and their parents.

The Faculty

The faculty for this interdisciplinary program is provided by cooperating departments within the Schools of Education, Fine and Applied Arts, and Letters and Science. Ann M. Bingham-Newman, Assistant Professor of Home Economics, serves as Coordinator.

The Undergraduate Program

The Bachelor of Arts degree curriculum provides students with a broad foundation in the social sciences and social services. The 186-unit program incorporates some General Education courses which serve as prerequisites to upper division courses in the major; students are advised to plan their General Education programs accordingly.

Two options are offered within the program. One provides a pattern of study for entry into professional areas other than teaching; the other meets requirements for a multiple subjects credential.

Requirements for the Major

The Bachelor of Arts degree in Child Development is available in two options. Option I, the General Program, consists of a total of 108 units, of which 62-64 are in required courses and 46-47 units are selected from electives. Option II for the Multiple Subjects Credential consists of a total of 129-133 units, of which 61 are in a prescribed pattern of General Education courses and 68-72 units are in courses required to complete the major. Students entering the program should plan their course work with a Child Development adviser. Also, students seeking the credential should consult an adviser in the School of Education.

Option I: General Program

Lower Division

Required Courses (22-28 units):

In Home Economics:

- 220 The Child (4)
- 221 Observation of Young Children (3)
- 250 Human Nutrition (3)

In Psychology:

- 150 Human Behavior (4)
- 201 Elementary Physiological Psychology (4)

Select *one* from following:

- Anthropology 250
- Sociology 201

Select *one* from following:

- Home Economics 120
- Psychology 326 (earns upper division credit)
- Sociology 440 (earns upper division credit)

Upper Division

Required Courses (36-40 units):

Forty units will be required if upper division credit is earned in lower division section above.

In Elementary Education:

- 462 Dynamics of Play in Early Childhood Education (4)

In English:

- 430 Children's Literature (4)

In Home Economics:

- 416CD Child Nutrition (4)

In Psychology:

- 412A Psychology of Human Development: Childhood and Adolescence (4)

- 433 Psychology of Cognitive Development (4)

Select *one* from following:

- Educational Guidance 460
- Sociology 476

Select *one* from following:

- Anthropology 443
- Elementary Education 466
- Chicano Studies 470A, 470B
- Pan-African Studies 401, 420
- Sociology 460

Select *one* from following:

- Home Economics 320, 426

Select *one* from following:

- Speech Communication 456, 494

Electives (46-47 units):

Select additional units of which at least one course is selected from each of the following six areas, and at least 3 courses are selected in each of 2 areas. Units may not be counted in both elective section and required section above.

1. Select at least *one* from following:

- Anthropology 443
- Chicano Studies 470A, 470B
- Elementary Education 461, 464, 466
- Education 494, 495
- Home Economics 422, 425, 426
- Pan-African Studies 401
- Recreation 201, 202, 203

2. Select at least *one* from following:

- Art 410, 430
- Drama 301, 306, 485
- Elementary Education 424
- Music 490, 492
- Physical Education 420
- Recreation 204

3. Select at least *one* from following:

- Anthropology 435

Educational Foundations 437
 Educational Guidance 405AB, 484
 Health and Safety 401, 460, 464
 Home Economics 423
 Nursing 460
 Pan-African Studies 400, 425
 Psychology 412B, 418A, 419, 422, 426, 436AB, 462
 Sociology 472
 4. Select at least *one* from following:
 Broadcasting 201
 Speech Communication 267, 268, 278, 330, 370, 371, 461, 463, 478, 489, 490
 5. Select at least *one* from following:
 Psychology 406, 410AB
 Special Education 400, 440, 462
 6. Select at least *one* from following:
 Educational Foundations 452
 Liberal Studies 200
 Mathematics 120AB
 Psychology 202, 302, 411
 Sociology 210AB

Option II: Multiple Subjects Credential

BLOCK I: ENGLISH, COMMUNICATION

General Education Requirements (12 units):

In English:

150A or B Written Expression I, II (4)
 250 Understanding Literature (4)

In Speech Communication:

150 Oral Communication (4)

Major Requirements (18–20 units):

In English:

401 English Language in America (4)
 430 Children's Literature (4)

Select *one* from following:

Speech Communication 456, 494

Select *one* from following:

Speech Communication 160, 267, 268, 371, 456, 489, 490, 494

Select *one* from following:

Chicano Studies 201
 English 251, 308, 340, 406, 410
 Pan-African Studies 422

BLOCK II: MATHEMATICS AND SCIENCE

General Education Requirements (21 units):

Mathematics 120AB Elementary Mathematics for Teachers (6)

Select courses to total 15 units from the Natural Science area of the General Education requirement. All university requirements must be satisfied, such as one unit of laboratory experience and one course from the following: Astronomy, Biology, Chemistry, Geology, Microbiology, Physics.

Major Requirements (11 units):

In Home Economics:

250 Human Nutrition (3)
 416CD Child Nutrition (4)

In Psychology:

201 Elementary Physiological Psychology (4)

BLOCK III: SOCIAL SCIENCES

General Education Requirements (16 units):

Geography 150 Human Geography (4)
 History 202A or B United States Civilization (4)

Political Science 150 Government and American Society (4)

Psychology 150 Human Behavior (4)

Major Requirements (20–22 units):

In Psychology:

412A Psychology of Human Development: Childhood and Adolescence (4)

433 Psychology of Cognitive Development (4)

Select *one* from following:

Anthropology 443
 Chicano Studies 470A, 470B
 Elementary Education 466
 Pan-African Studies 401
 Sociology 460

Select *one* from following:

Anthropology 250
 Sociology 201

Select *one* from following:

Home Economics 120
 Psychology 326
 Sociology 440

BLOCK IV: HUMANITIES

General Education Requirements (12 units):

Recommended:

Select one foreign language sequence for a total of 12 units or complete the following sequence:

Art 351 Art Appreciation (3)
 Music 150 Music in World Culture (4)

In addition, select course(s) from following to complete 12 unit requirement:

Art 102, 400, 410, 440
 Music 219, 230, 304, 310, 343, 401
 Physical Education 161, 455, 463

Major Requirements (19 units):

In Art:

200 Exploring the Arts in Early Childhood (4)
 430 Art for the Young Child (4)

In Music:

490 Music for Early Childhood (4)
 492 Musical Creativity for Children (4)

In Physical Education:

420 Movement Experience in Growth and Development (3)

NOTE: In addition to the Option, the Credential also requires:

Home Economics 422 Nursery School Organization and Management (3)

The Credential Program

A diversified major for the B.A. degree in Child Development has been approved by the Commission for Teacher Preparation and Licensing for examination waiver for the multiple subjects credential. Option II of the B.A. program meets these credential requirements. Additionally, an Early Childhood Specialist credential has been defined, for which students must earn a multiple subjects credential either concurrently or sequentially.

Students should consult advisers in both the Child Development program office and the School of Education.



Comparative Literature

In School of Letters and Science

The program in Comparative Literature is designed for students who wish to undertake intense study of world literature as preparation for careers in literary criticism, creative writing, or teaching at various levels. This program may also provide appropriate preparation for careers in journalism, law, international trade, diplomacy, and other branches of government service.

The Faculty

The faculty in Comparative Literature is drawn from the Departments of English and Foreign Languages and Literatures. Advisement information is available in the department offices.

Admission to the Program

Entrance to the program requires sufficient competence in one foreign language to be able to deal with standard literary text in that language. Students are expected to demonstrate this competence in a screening examination or to achieve it by passing 12 units in a foreign language at the intermediate level of proficiency.

Requirements for the Major

The Bachelor of Arts degree program requires 186 units, of which 72–84 are in the major. The lower division requirement of 24–36 units includes 8 units in the required core, 4 units in the period concentration, and 12–24 units in a foreign language at the intermediate level of proficiency.

Students are required to structure their programs for the major with a Period Concentration of 8 units, a Primary Cultural Concentration of 20 units, and a Secondary Cultural Concentration of 12 units in an area different from that of the primary sequence. To assure desired breadth, the following cultural concentrations may *not* be combined: British and American, Spanish and Hispano-American, French and Spanish.

Required Core Program

The required core for all students consists of 8 units of lower division and 12 units of upper division courses in English, as follows:

Lower Division

Required in English (8 units):

Select *two* from following:

- 221 Interpreting Fiction (4)
- 222 Interpreting Dramatic Literature (4)
- 223 Interpreting Poetry (4)

Upper Division

Required in English (12 units):

- 480 Literature and the Fine Arts, B.C. (4)
- 482 The Bible as Literature: Old and New Testaments (4)

Select *one* from following:

- 427 Modern Drama: Continental, English, and American (4)
- 428 Contemporary Drama: Continental, English, and American (4)
- 485 Major Continental Fiction: Stendhal to Tolstoy (4)
- 486 Twentieth Century Continental Fiction (4)

Foreign Language Requirement

Intermediate-level competency in a given foreign language is prerequisite to the literature courses in that language. The choices of primary and secondary cultural concentrations determine the foreign language requirements of either 12 or 24 units.

Select *one* or *two* from following: Chinese 200ABC, French 210AB, German 200ABC, Japanese 200ABC, Russian 201AB, Spanish 200ABC.

Period Concentration

This block of 8 units consisting of one lower division and one upper division course in English is required of all students.

Select *one* of following pairs of courses:

- (1) 258 Mythology in Literature (4)
424 Greek and Roman Drama in Translation (4)
- (2) 258 Mythology in Literature (4)
484 Major Continental Fiction: Cervantes to Balzac (4)

Primary Cultural Concentration

Students select 20 units from one of the following blocks of courses as the area for their primary cultural concentration.

AMERICAN

Required in English (20 units):

471 American Authors: Edwards to Emerson (4)

472 American Authors: Melville to Whitman (4)

473 American Authors: Dickinson to James (4)

Select *two* from following:

English 427, 428, 475, 478, 479

BRITISH

Required in English (16 units):

417 Shakespeare I (4)

Select *three* from following:

English 460, 461, 463, 464, 465, 467, 468, 478, 479

Elective in English (4 units):

Select any 400-level course in World Literature.

FRENCH

Required in French (20 units):

Select *five* from following:

French 413, 414, 415, 420, 430, 431, 440, 460, 461, 471, 499

GERMAN

Required in German (20 units):

Select *five* from following:

German 330, 422, 430, 434, 460, 499

JAPANESE

Required in Japanese (20 units):

305 Survey of Japanese Literature I (4)

306 Survey of Japanese Literature II (4)

Select *three* from following:

Japanese 399, 406, 408, 410, 460

RUSSIAN

Required in Russian (16 units):

310 Russian Civilization (4)

399 Directed Reading (1-4)

402 Russian Short Story (4)

403 The Russian Novel (4)

Elective in Russian (4 units):

Select one 4-unit upper division course in Russian literature.

SPANISH

Required in Spanish (20 units):

408 Spanish Literature I (4)

410 Spanish Literature II (4)

Select *three* from following:

Spanish 414, 418, 424, 426, 428, 460, 470

SPANISH-AMERICAN

Required in Spanish (20 units):

411 Spanish-American Literature I (4)

413 Spanish-American Literature II (4)

Select *three* from following:

Spanish 417, 421, 460, 483, 485

Secondary Cultural Concentration

Students select 12 units from one of the following blocks of courses as the area for their secondary cultural concentration.

AMERICAN

Select *one* from following:

English 471, 472, 473

Select *two* from following:

English 427, 428, 475, 478, 479

BRITISH

Select *one* from following:

English 460, 461, 463, 464, 465, 467, 468, 478, 479

Select any 400-level course in English literature.

Select one 400-level course in English corresponding to period of concentration.

CHINESE

Required in Chinese:

310 Chinese Civilization (4)

401 Chinese Literature I (4)

402 Chinese Literature II (4)

FRENCH

Select *two* 400-level courses in French literature.

Select one 4-unit course in French corresponding to period of concentration.

GERMAN

Select *three* from following:

German 330, 422, 430, 434, 460, 499

JAPANESE

Required in Japanese:

305 Survey of Japanese Literature I (4)

306 Survey of Japanese Literature II (4)

Select one 4-unit, 400-level course in Japanese literature.

RUSSIAN

Select *three* from following:

Russian 310, 399, 402, 403

SPANISH

Select *one* from following:

Spanish 408, 410

Select *two* from following:

Spanish 414, 418, 424, 426, 428, 460, 470, 480

SPANISH-AMERICAN

Select *one* from following:

Spanish 411, 413

Select *two* from following:

Spanish 417, 421, 460, 483, 485

Criminal Justice

In School of Fine and Applied Arts

The Department of Criminal Justice offers programs leading to the Bachelor of Science degree in Criminal Justice, to serve career development in such areas as investigations, administration, and correctional management. Also offered is an undergraduate minor for students majoring in other fields. Students interested in a Master of Science degree in Criminalistics or in Criminal Justice are referred to the *Graduate Programs* section. The Criminalistics program builds upon undergraduate preparation in chemistry.

The Faculty

Professors: Allen P. Bristow, Harry Diamond, G. Douglas Gourley (Chairperson), Ernest R. Kamm.

Associate Professors: David L. Chapman, Richard C. Grace, Edgar A. Smith, Nathaniel Trives.

Assistant Professor: Thell E. Glascock.

The Undergraduate Program

The Bachelor of Science degree in Criminal Justice is designed for either preservice or inservice students who wish to prepare for or advance in law enforcement careers.

Limitations on Transfer Credit

Students intending to transfer from community colleges to Cal State L.A. to continue work for a Bachelor of Science degree in Criminal Justice are advised to complete their General Education requirements and the five core courses equivalent to those in the Cal State L.A. curriculum prior to transferring.

Social Science Prerequisites

Criminal Justice majors are required to include the following courses or their equivalents, in their General Education programs, since they are prerequisite to most of the approved electives:

In Political Science:

150 Government and American Society (4)

In Psychology:

150 Human Behavior (4)

In Sociology:

201 Introductory Sociology (4)

Requirements for the Major

A total of 192 units is required for the Bachelor of Science degree in Criminal Justice, including a minimum of 68 units within the major. All students must complete a required core program consisting of 20 quarter units in lower division courses. The total upper division requirement is 48 units, distributed among courses in criminal justice and related fields, particularly sociology.

Lower Division

Required in Criminal Justice (20 units):

101 Introduction to Administration of Justice (4)

126 Concepts of Criminal Law (4)

221 Legal Aspects of Evidence (4)

222 Principles and Procedures of Justice System (4)

223 Community Relations (4)

Electives in Criminal Justice (0–12 units):

235 Elements of Investigation (4)

236 Traffic Control and Regulation (4)

238 Police Patrol (4)

Upper Division

Required in Criminal Justice (4 units):

301 Administration of Criminal Justice Systems (4)

Options

One of the following four options is selected for the degree: *General, Investigations, Administration, and Correctional Management*. Each requires a total of 44 units.

I. General Option

Required in Sociology (8 units):

Select two from following:

426 Deviant Behavior (4)

460 Race and Social Conflict (4)

480 Criminology (4)

482 Juvenile Delinquency (4)

484 Corrections (4)

486 Probation and Parole (4)

Electives in Criminal Justice (16 units):

Select with approval of adviser.

Electives in Related Fields (20 units):

Select courses from list of "Approved Electives" below, excluding those used to meet option requirements. Emphasis should be on behavioral and social sciences, with attention to prerequisites.

II. Investigations Option

Required in Criminal Justice (20 units):

361 Advanced Investigation Methodology (4)

363 Interviewing Techniques (4)

- 365 Personal Identification Systems (4)
- 428 Contemporary Criminal Procedures (4)
- 461 Physical Evidence (4)

Electives in Criminal Justice (8 units):

Select two from following:

- 362 Investigative Photography (4)
- 435 Contemporary Vice Problems (4)
- 447 Drug Control Systems (4)
- 476 Retail Commercial Security (4)
- 499 Undergraduate Directed Study (1-4)

Electives in Related Fields (16 units):

Select from approved electives listed below, with attention to prerequisites.

III. Administration Option

Required in Criminal Justice (16 units):

- 401 Innovative Management Systems (4)
- 408 Methods of Supervision (4)
- 423 Community Relations Program Management (4)

- 429 Administrative Law (4)

Electives in Criminal Justice (8 units):

Select two from following:

- 404 Unusual Occurrence Management (4)
- 436 Correctional Institution Management (4)
- 437 Traffic Management Systems (4)
- 475 Contemporary Security Administration (4)
- 491 Contemporary Studies in Criminal Justice (4)
- 499 Undergraduate Directed Study (1-4)

Electives in Related Fields (20 units):

Select courses from list of "Approved Electives" below, with attention to prerequisites.

IV. Correctional Management Option

Required in Criminal Justice (12 units):

Select three from following:

- 363 Interviewing Techniques (4)
- 428 Contemporary Criminal Procedure (4)
- 436 Correctional Institution Management (4)
- 439 Juvenile Law and Procedure (4)
- 447 Drug Control Systems (4)

Required in Sociology (16 units):

Select four from following:

- 426 Deviant Behavior (4)
- 460 Race and Social Conflict (4)
- 480 Criminology (4)
- 482 Juvenile Delinquency (4)
- 484 Corrections (4)
- 486 Probation and Parole (4)

Electives in Related Fields (16 units):

Select courses from list of "Approved Electives" below, excluding those used to meet option requirements. Emphasis should be on behavioral and social sciences, with attention to prerequisites.

Approved Electives

Courses in related fields are selected for the number of elective units specified in option programs, with approval of adviser and attention to prerequisites shown in course descriptions.

In Anthropology:

- 250 Cultural Anthropology (6)
- 260 Physical Anthropology (4)
- 470 Language and Culture (4)

In Business:

- 209 Applied Business and Economic Statistics 1 (3)
- 301 Administrative Communications (4)
- 305 Commercial Law (4)
- 307 Management and Organizational Behavior (4)

In Chicano Studies:

- 311 Chicano Cultural History (4)
- 410AB Psychology of the Chicano (4-4)
- 444 History of the Chicano People (4)

In Educational Foundations:

- 452 Statistics in Education (4)

In English:

- 403 Language and Culture (4)
- 406 Advanced Writing (4)

In Pan African Studies:

- 303AB Afro-American Social Thought (4-4)
- 410 Politics of Black Power (4)

In Political Science:

- 305 American Federal Government (4)
- 403 State and Local Government (4)
- 404 Urban Government and Politics (4)
- 444 Anglo-American Legal System (4)
- 446 Comparative Legal Systems (4)
- 463 Public Personnel Administration (4)
- 466 Public Financial Administration (4)
- 470 Public Relations in Government (4)

In Psychology:

- 302 Statistical Methods in Psychology (5)
- 308 Contemporary Psychology (4)
- 410AB Abnormal Psychology (4-4)
- 420 Psychology of Communications (4)
- 422 Social Psychology (4)
- 442 Industrial and Organizational Psychology (4)

In Sociology:

- 210A Elementary Statistics (3)
- 420 Small Groups (4)
- 422 Social Psychology (4)
- 424 Mass Communications and Public Opinion (4)
- 426 Deviant Behavior (4)
- 430 Urban Sociology (4)
- 442 Social Change (4)
- 460 Race and Social Conflict (4)
- 480 Criminology (4)
- 482 Juvenile Delinquency (4)
- 484 Corrections (4)
- 486 Probation and Parole (4)

In Speech Communication:

- 278 Problem Solving Through Group Discussion (4)
- 478 Group Communications: Dynamics of Leadership and Participation (4)

Minor in Criminal Justice

The minor in Criminal Justice is designed for students majoring in other fields who wish to prepare for careers relating to the administration of criminal justice. A total of 32 units is required.

Lower Division

Required in Criminal Justice (16 units):

- 101 Introduction to Administration of Justice (4)
- 126 Concepts of Criminal Law (4)
- 222 Principles and Procedures of Justice System (4)
- 223 Community Relations (4)

Upper Division

Required in Criminal Justice (16 units):

- 301 Administration of Criminal Justice Systems (4)

- 428 Contemporary Criminal Procedure (4)
- 436 Correctional Institution Management (4)
- 439 Juvenile Law and Procedure (4)

Courses of Instruction

Lower Division Courses

101 Introduction to Administration of Justice (4)

History and philosophy of law enforcement and administration of justice in America; examination of various agencies, systems, and subsystems; role expectations and their interrelationships; theories of crime, punishment, and rehabilitation; ethics, education, and training for professionalism in the system.

126 Concepts of Criminal Law (4)

General provisions of criminal law; history and development; elements of a crime, parties to a crime; defenses to criminal culpability; elements of specific crimes; crimes against person, property, public place, and safety.

221 Legal Aspects of Evidence (4)

Leading rules and principles of exclusion and selection; nature of evidentiary matter; burden of proof, discovery; nature and effect of presumptions; examination, competency, and privilege of witnesses; proof of authenticity and contents of writings and other documentary evidence; constitutional provisions.

222 Principles and Procedures of Justice System (4)

Prerequisite: Criminal Justice 101 or consent of instructor. Role and responsibilities of each segment within administration of justice system; law enforcement, judicial, corrections; subsystem procedures from initial entry to final disposition; interrelationships of segments within system.

223 Community Relations (4)

Interrelationships and roles of public agencies; organizations and individuals with which they interface.

235 Elements of Investigation (4)

Basic investigative methodology; function of detective for justice system objectives; modus operandi; sources of information, public and private sectors; surveillance; personal identification; interviewing and interrogation techniques; preliminary and follow-up investigations.

236 Traffic Control and Regulation (4)

Survey of traffic control problem, epidemiology of motor vehicle accidents, motor vehicle transportation and the police, California Vehicle Code and other laws related to traffic problems.

238 Police Patrol (4)

Prerequisites: Criminal Justice 101 or consent of instructor; current employment in a criminal justice agency. Responsibilities, powers, and duties of uniformed police officers, patrol techniques, field interviews, mechanics of arrest, prison safety, raids, emergency response procedure and crime prevention functions of officer on patrol.

Upper Division Courses

301 Administration of Criminal Justice Systems (4)

Administrative theory and practice in criminal justice systems, with emphasis on organization and functions of specialized sub-units.

361 Advanced Investigation Methodology (4)

Prerequisites: Criminal Justice 101, 126, 221, and 301, or consent of instructor. Investigative responsibilities of public agencies at all governmental levels; methodology, including informational sources, surveillance, crime scenes, modus operandi, computer systems, identification, interviewing, court preparation and presentation; public and media relations.

362 Investigative Photography (4)

Prerequisite: Industrial Studies 290 or equivalent, or consent of instructor. Use of photography in investigative processes; courtroom presentation of evidential photographs.

363 Interviewing Techniques (4)

Prerequisites: Criminal Justice 101 and 235, Psychology 150 and upper division standing, or consent of instructor. Philosophy and concepts of interviewing; effective techniques in handling witnesses, victims, informants, children, the mentally disturbed, inmates, criminal suspects; scientific equipment, legal aspects, psychological and physiological considerations, judicial process.

365 Personal Identification Systems (4)

Prerequisite: Criminal Justice 235 and 301 or consent of instructor. Types of personal identification systems which serve investigative function in public agencies; existing and potential resources; analysis of modus operandi, fingerprints, voiceprints, psychological profile; visual identification.

395 Community Service in Criminal Justice (1-3)

Prerequisites: Criminal Justice 301, approval by faculty sponsor in consultation with EPIC Director, and acceptance by a community agency. Participation in work of community service. Graded CR/NC only. May be repeated to maximum of 6 units.

398 Cooperative Education (1-3)

Prerequisites: Overall g.p.a. of 2.35, upper division standing in departmental major or minor, and approval of departmental coordinator prior to registration. Active employment, with regular meetings to discuss student's progress. May be repeated to maximum of 6 units. Graded CR/NC only.

401 Innovative Management Systems (4)

Prerequisites: Criminal Justice 301, upper division standing, and consent of instructor. Contemporary management concepts; adaptation of management systems for implementation in criminal justice agencies.

404 Unusual Occurrence Management (4)

Prerequisite: Criminal Justice 301 (may be taken concurrently). Control techniques for management of unusual occurrences disruptive to community, including civil disturbance, confrontations, insurrection, disasters; planning for special events.

408 Methods of Supervision (4)

Prerequisite: Criminal Justice 401 or consent of instructor. Responsibility of first-level supervisors in management, motivation, leadership, morale, discipline, communication, counseling, interviewing. Resolution of complaints and grievances; performance appraisal, decision-making, planning, and training.

423 Community Relations Program Management (4)

Prerequisites: Criminal Justice 223 and 301, or consent of instructor. Managerial aspects of planning, programming, and operation for effective community relations by agencies in criminal justice system.

428 Contemporary Criminal Procedures (4)

Prerequisites: Criminal Justice 126, 221, and 301, or consent of instructor. Bill of Rights and federal criminal procedure; application of due process clause of Fourteenth Amendment; exclusionary rule; case law reconciling civil rights and security of community.

429 Administrative Law (4)

Prerequisite: Criminal Justice 301 or consent of instructor. Areas of civil law of particular significance to administrators in criminal justice systems, including administrative law, municipal corporation, torts, sovereign immunity, labor law, agency relations.

435 Contemporary Vice Problems (4)

Prerequisite: Criminal Justice 361 or upper division standing and consent of instructor. Philosophy and theory of vice control; community standards; organized crime; statutory and case law; suppression, investigation and prosecution; special consideration of laws on gambling, prostitution, sex crimes.

436 Correctional Institution Management (4)

Objectives of correctional administration; laws, records, public relations, personnel and relationships to programs, including custodial and noncustodial interrelationships and divisions; physical plant and security, employment, care and treatment program.

437 Traffic Management Systems (4)

Prerequisite: Criminal Justice 236 or equivalent, or consent of instructor. Theory and functions of highway traffic administration activities, coordination among

agencies. Supervision of traffic, accident control, including reconstruction and cause analysis.

439 Juvenile Law and Procedure (4)

California Juvenile Court Act, Youth Authority, and other legislation governing juvenile delinquency; rights of juveniles, development in California law, including probation procedures and institutional care.

447 Drug Control Systems (4)

Prerequisites: Criminal Justice 126, 221, 235, and 301 and upper division standing or consent of instructor. Drugs and drug abuse; investigation methods, including undercover informants; field identification, surveillance, statutory and case law; presentation of cases in court.

460 Law Enforcement, Public Schools, and the Community (4)

Prerequisite: Upper division standing or consent of instructor. Interrelationships between law enforcement, schools, and the community; juvenile delinquency, crime prevention and control, vice offenses, narcotic addiction and other behavior problems. May not be taken for credit by Criminal Justice majors except with consent of department chairman.

461 Physical Evidence (4)

Prerequisite: Criminal Justice 235 or consent of instructor. Collection, preservation, and utilization of physical evidence by investigator. Use of physical evidence in judicial processes.

475 Contemporary Security Administration (4)

Prerequisites: Criminal Justice 301 and upper division standing or consent of instructor. Methods and techniques of security protection for buildings, personnel, and business, industrial, and technological equipment.

476 Retail Commercial Security (4)

Prerequisite: Criminal Justice 301 or consent of instructor. Analysis and assessment of commercial security protection systems, including theft controls, legal authority and liability, safeguards for physical structures and contents.

491 Contemporary Studies in Criminal Justice (1-8)

Prerequisites: Upper division standing or professional experience with consent of instructor. Investigation and study of contemporary problems in field. Various subjects, as announced; may be repeated as subject matter changes.

499 Undergraduate Directed Study (1-4)

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

Economics

In School of Business and Economics

The Department of Economics offers a Bachelor of Arts degree in Economics. In addition, the Department participates in the interdisciplinary Bachelor of Arts degree program in Social Science, for which a concentration in Economics may be taken. This program is described under Social Science in the School of Letters and Science.

The Department offers a Master of Arts degree in Economics, described in the *Graduate Programs* section.

The Faculty

Professors: Ke Ting Hsia, Sun K. Kim, Mildred B. Massey, Leonard G. Mathy, Donald A. Moore (Chairperson), William Simpson, Gene B. Tipton, John A. Tomaske.

Associate Professors: William A. Bright, Harold Brumm, Jr., Erika Georges, William Graham, Judd Hammack, George Jensen, Arthur J. Kirsch, Paul T. Mu, M. Richard Roseman, Gerald F. Sorrensen.

Assistant Professors: Georgio Canarella, Nikolai Pulchritudoff, Donald Snyder, Earl O. Stephens.

The Undergraduate Program

The Bachelor of Arts with a major in Economics prepares students to qualify for positions in business and government. Specific areas include finance, labor, transportation, international trade, banking, and regulatory agencies. A major in Economics also provides foundations for teaching at the college or high school level, and for entrance into a graduate school or law school.

Three options are offered. The first emphasizes social and behavioral sciences, the second emphasizes applications of economics, and the third emphasizes preparation for graduate study in economics.

Requirements for the Major

A total of 64–72 units is required for the major, depending on option. All students take a common core of 22 units in lower and upper division courses in Economics and Business. In addition, students select one of the three options to complete remaining degree requirements. For advisement, contact the Department of Economics office, South Tower 917, phone 224-3884.

Core Requirements

The 22 units in the common core of required courses for all majors are as follows:

Lower Division

Required Courses (11 units):

In Economics:

200A Principles of Economics I (Macroeconomics) (4)

200B Principles of Economics II (Microeconomics) (4)

In Business:

209 Applied Business and Economics Statistics I (3)

Additional lower division requirements are listed under each option.

Upper Division

Required Courses (11 units):

In Economics:

303 Money, Banking and the Economy (4)

310 Economics of the Business Firm (4)

In Business:

309 Applied Business and Economic Statistics II (3)

Option Requirements

Students select one of the following three options, comprising 42–50 units, to fulfill requirements for the major.

Option 1:

Social and Behavioral Sciences

This option serves students with interdisciplinary interests in economics and other areas of social and behavioral sciences: anthropology, geography, history, political science, psychology, or sociology; and American, Chicano, Latin American, Pan-African, or urban studies. The option consists of 42 units, as follows:

Lower Division

Required Courses (10 units):

In Business:

202 Survey of Accounting (4)

In Mathematics:

240AB Introductory Mathematical Analysis for Business (4-2)

Upper Division

Required in Economics (4 units):

Select one from following:

403 Macroeconomics (4)

410 Microeconomics (4)

412 Development of Economic Thought (4)

Electives (28 units):

Select 12–16 units from courses in economics and mathematics, and 12–16 units in social or behavioral sciences other than economics, with approval of adviser.

Option 2: Applied Economics

This option serves students interested in application of economics to public or business administration. The option consists of 46–48 units, as follows:

Lower Division

Required Courses (14–16 units):

In Business:

200AB Principles of Accounting (3-3)

or

202 Survey of Accounting (4)

294 Business Computer Systems (4)

In Mathematics:

240AB Introductory Mathematical Analysis for Business (4-2)

Upper Division

Required in Economics (8 units):

403 Macroeconomics (4)

410 Microeconomics (4)

Electives (24 units):

Select a minimum of 12 units in economics and the remainder from mathematics, business administration, and the public administration area of political science, with approval of adviser.

Option 3: Preprofessional

This option prepares students for graduate work required to qualify for professional positions in economics. The option consists of 46–50 units, as follows:

Lower Division

Required Courses (14–18 units):

In Business:

200AB Principles of Accounting (3-3)

or

202 Survey of Accounting (4)

294 Business Computer Systems (4)

In Mathematics:

Select one of the following:

240AB Introductory Mathematical Analysis for Business (4-2)

206-07 Calculus, I, II (4-4)

Upper Division

Required in Economics (16 units):

403 Macroeconomics (4)

410 Microeconomics (4)

412 Development of Economic Thought (4)

495 Senior Seminar in Theoretical Topics (4)

Electives (16 units):

Select courses in economics, business or mathematics, with approval of adviser.

Minor in Economics

A minor in Economics is available for students majoring in fields other than business or economics. A total of 25–27 units is required.

Lower Division

Required Courses (9–11 units):

In Economics:

200AB Principles of Economics I, II (4-4)

or

301 Economics for the Social Sciences (6)

In Business:

209 Applied Business and Economic Statistics I (3)

Upper Division

Required in Economics (4 units):

303 Money, Banking and the Economy (4)

or

310 Economics of the Business Firm (4)

Electives in Economics (12 units):

Select courses in consultation with major and minor program advisers.

The Credential Program

The Department of Economics currently offers no approved program for examination waiver for the single subject credential in Social Science. Students should consult advisers in both the department office and the School of Education.

Courses of Instruction**Lower Division Courses****150 Economics for the Citizen (4)**

Not to be taken by Economics and Business Administration majors. Economic organization of societies, emphasizing forms and functions of socioeconomic units; household, business enterprises, and government. Concentration is on unit interdependence, levels of economic activity and resource allocation.

200A Principles of Economics I (Macroeconomics) (4)

Credit not given for both Economics 200A and 201A. Course not recommended for freshmen. Introduction to concepts and tools of economic analysis; aggregate economics, emphasizing national income and determinants of the level of economic activity, money and banking, and the role of government.

200B Principles of Economics II (Microeconomics) (4)

Prerequisite: Economics 200A or 201A. Credit not given for both Economics 200B and 201B. Introduction to concepts and tools of economic analysis, with emphasis on price and distribution theory; product and factor markets and their interdependence; international trade, comparative advantage and effects of tariffs.

201A Introduction to Economics I (Macroeconomics) (3)

Registration open only to majors in business administration, business education, management science, and industrial technology. Credit not given for both Econom-

ics 200A and 201A. Course not recommended for freshmen. Introduction to concepts and tools of economic analysis; aggregate economics, emphasizing national income and determinants of the level of economic activity, and the role of government.

201B Introduction to Economics II (Microeconomics) (3)

Prerequisite: Economics 200A or 201A. Registration open only to majors in business administration, business education, management science, and industrial technology. Credit not given for both Economics 200B and 201B. Introduction to concepts and tools of economic analysis, with emphasis on price theory and product markets.

Upper Division Courses

300 Economics for Engineers (4)

Basic economic concepts, relationships between economic and engineering problems, role of interest and capital in cost minimization, analysis of financial statements, original and alternative investments, capital depreciation and replacement problems.

301 Economics for the Social Sciences (6)

Prerequisite: Upper division standing. Nature and meaning of fundamentals of economic analysis and their application to operation of the American economy. Special attention given to interrelationship and integration of economics and other social sciences. Credit not given for both Economics 301 and 200A, 200B, 201A or 201B.

302 Labor Economics (4)

Prerequisite: Economics 200AB or 201AB or 301. Use of labor resources in economic system; employment, wage rates, development of unions and collective bargaining; labor legislation.

303 Money, Banking, and the Economy (4)

Prerequisite: Economics 200A or 201A or 301. Nature and flow of money and credit; influence on prices, production, and employment. Commercial and Federal Reserve banking systems and the level of national income.

310 Economics of the Business Firm (4)

Prerequisites: Mathematics 240AB and Economics 200AB, 201AB or 301. Operation of a price system in a free-enterprise economy; special emphasis on economic factors governing and influencing managerial decisions.

350 Economics of Poverty in the U.S. (4)

Prerequisite: One of following courses or consent of instructor: Economics 150, 200A, 200B, 201A, 201B, or 301. Concept and measurement of poverty; analysis of both economic causes and effects of poverty; policy implications and remedies.

390 Current Economic Problems (4)

Prerequisite: Economics 200A or 201A or 301. Analysis of significant problems of the day; role of government, incentives, groups with large market power, inflation, national debt, maintaining aggregate demand, poverty, balance of payments, and economic growth.

403 Macroeconomics (4)

Prerequisites: Business 200AB or 202, Mathematics 240AB or 206-7, and Economics 303. Intermediate macroeconomic theory: determination of national income; theories of aggregate consumption, investment, unemployment, the price level; national income and product accounts; theory of growth.

406 Principles of International Economics (4)

Prerequisite: Economics 200AB or 201AB or 301. Economic bases and mechanisms of international commercial relations; government policies on tariffs, exchange controls, subsidies.

410 Microeconomics (4)

Prerequisite: Economics 310 or consent of instructor. Intermediate microeconomic theory: intermediate economic analysis and evaluation of market system of resource allocation and income distribution.

412 Development of Economic Thought (4)

Prerequisite: Economics 200AB or 201AB or 301. Evolution of ideas developed over the years to analyze and deal with economic problems.

413 Mathematical Economics (4)

Prerequisites: Economics 303 or 310, or consent of instructor. Mathematical methods for solution of maximization and minimization problems, differential, linear and calculus-of-variation methods. Mathematical treatment of microeconomic and macroeconomic problems in current literature.

414 Econometrics (4)

Prerequisites: Economics 413 and Business 309, or consent of instructor. Mathematical formulation of economic models, empirical estimation methods, testing and verification; emphasis on applications to economic and business research, with relevance to forecasting and policy making.

420 Labor Legislation (4)

Prerequisite: Economics 302. Development of common law decisions in the labor field; federal and state, social security, protective and labor relations legislation and their administration.

425 Industry Structure and Regulation (4)

Prerequisite: Economics 200AB or 201AB or 301, or consent of instructor. Market structure in American capitalism; theory and practice of antitrust and public utility regulation; comparative studies of public policy toward firms.

433 Public Finance (4)

Prerequisite: Economics 200AB or 201AB or 301; Economics 303 recommended. Government expenditures and revenues, effects on society; determination of government activities, budget systems, principles of taxation, analysis of types of taxes, intergovernmental fiscal relations, fiscal policy and debt management.

435 Employment, Inflation, and Growth (4)

Prerequisite: Economics 303 or consent of instructor. Theoretical and empirical analysis of causes of unemployment, inflation, and unstable growth; counteractive policies; monetary and fiscal policy; growth vs. no-growth; macroeconomic forecasting.

440 Urban and Regional Economics (4)

Prerequisites: Economics 200AB or 201AB or 301. Location and spatial organization of economic activity. Regional economic growth and decline. Urban economic growth, income analysis, income distribution, economic stability, and economic aspects of selected urban economic problems.

445 Economics of Natural Resources and the Environment (4)

Prerequisites: Economics 200AB or 201AB or 301. Economic principles applied to problems of natural resource utilization, development, and conservation; economic aspects of environmental quality.

460 Economic Growth of Underdeveloped Areas (4)

Prerequisite: Economics 200AB or 201AB or 301. Problems of development in economically poor countries; forces which give rise to long-run growing power in an underdeveloped economy. Economic analysis, history, and case studies utilized.

471 American Economic History (4)

Prerequisite: Economics 200A or 201A or 301. Historical study of American economic development, industrialization, national legislation in industry and commerce.

480 Comparative Economic Systems (4)

Prerequisite: Economics 200AB or 201AB or 301; Economics 310 strongly recommended. Problems with which all economic systems must deal; comparative study of different systems, proposed or in operation, to deal with economic problems.

490 Economic Issues and Policies (4)

Prerequisites: Economics 200AB or 201AB and either 303 or 390, or equivalent. Priorities, goals, and economic issues; laissez-faire capitalism versus "welfare-state" capitalism or the conservative-liberal argument, responsibility of groups with large market power, current economic issues.

495 Senior Seminar: Theoretical Topics (4)

Prerequisites: Economics 403 and 410. Topics include welfare economics and general equilibrium, growth theory, decisions under uncertainty, linear optimization models, interrelationship between microeconomics and macroeconomics.

497 Economic Research (4)

Prerequisite: Business 409. Meaning of economic research, various research methods that can be and are used, and difficulties encountered in defining a research problem and locating research materials. Several papers required.

499 Undergraduate Directed Study (1-4)

Prerequisites: Economics major, senior standing, and consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare oral and written reports. Project to be selected in conference with sponsor before registration; progress meetings held regularly.

School of Education

The School of Education offers programs leading to certification for specified fields of professional employment in California public schools and work leading to the advanced degrees of Masters of Arts in Education, Master of Science in Counseling, Master of Arts in Speech Pathology and Audiology, offered jointly with the Department of Speech Communication and Drama, and the Doctor of Philosophy in Special Education, offered jointly with the University of California, Los Angeles. The graduate programs are described in the *Graduate Programs* section.

Because the University is located in the heart of metropolitan Los Angeles, programs in the School of Education reflect concern with the problems and challenges of urban education, with particular emphasis on bilingual/cross-cultural issues.

Admission to Programs

Admission to the University does not automatically admit students to credential or post-baccalaureate study in the School of Education. Formal application is required for admission to a specific degree or credential program. Teaching credential application procedures are described below. Applications for other credentials must be filed with the department specified in the descriptions of such credential programs.

Credential Programs

University programs have been approved, as of December 1, 1975, for those credentials designated by an asterisk (*). Programs submitted for other credentials are awaiting review and approval by the Commission for Teacher Preparation and Licensing.

(1) The *Teaching Credential*, with authorizations in single-subject instruction*, multiple-subjects instruction*, specialist instruction, and the designated subjects. Specialist instruction credentials include Bilingual/Cross-cultural Specialist*, Early Childhood Education Specialist, Health Sciences Specialist, Mathematics Specialist, Reading Specialist*, and Special Education Specialist*, including teachers of the communication handicapped, physically handicapped, learning handicapped, severely handicapped, and the gifted.

(2) The *Services Credential*, with specializations in administrative services*, pupil personnel services, health, and authorization to serve as a librarian*.

Since credential programs described in this publication are subject to change without notice, students are urged to seek current information concerning new credential requirements from the department in the School of Education which offers that program.

Candidates seeking additional authorization on prior credentials must consult previous issues of the General Catalog or Graduate Studies publi-

cations for program requirements, and seek advisement from the appropriate department concerning applicability of current courses to those requirements. Advisement of students working toward a credential is provided both by the departments in which they are taking their degrees and by the Departments of Elementary and Secondary Education.

Recommendations for teaching credentials and eligibility for waiver of subject matter examinations are contingent upon satisfaction of all requirements specified in each area.

Admission to Credential Programs

Applications for admission are available in the School of Education admissions office, KH C2088. Admission requirements are based on Sections 41100, 41101, and 41200 of *Title 5* of the *California Administrative Code*, and University regulations.

Screening requirements prerequisite to first quarter enrollment in restricted credential courses include:

- (1) Academic aptitude, as demonstrated by one of the following: (a) 25th percentile rank on ACT, SAT, GRE, SCAT, or Miller Analogies; (b) an overall grade point average of 2.50.
- (2) Writing ability, as evidenced by a C or better grade in English 150 or equivalent, or passing grade on an objective examination. An essay examination may be required in addition.
- (3) Completion of Psychology 150 or its equivalent.
- (4) Verification of satisfactory chest x-ray.

Continued enrollment is contingent upon satisfaction of additional admission requirements, which include:

- (1) Group advisement (credential, health, police records, psychological fitness).
- (2) Filing of a completed program agreement form with the School of Education admissions office.

(3) Presentation of a record of *C* or better grade in Speech Communication 150 or equivalent, and a recommendation for speech competence by a member of the Speech Communication faculty. Post-baccalaureate students entering the credential program are exempt from the course requirement, but must attain the recommendation.

Students are formally admitted to the teaching credential program upon completion of requirements stated above.

Directed Teaching

Directed teaching is one of the most important phases of teacher education at Cal State L.A. Students are not automatically admitted to directed teaching by completion of course work alone. To be assigned to directed teaching candidates must meet the following requirements:

(1) Be formally admitted to the teaching credential program.

(2) File an application for directed teaching in the quarter preceding that of actual assignment, meeting appropriate deadline dates and specific prerequisites set by the Departments of Elementary, Secondary, and Special Education, or the faculty in Child Development.

(3) Register as a matriculated student for the quarter in which the directed teaching assignment is made.

(4) Have a satisfactory record in the health examination, including chest x-ray, within one year prior to completion of directed teaching. Students may be examined at the Cal State L.A. Health Center or by their personal physician.

(5) Have a minimum grade point average of 2.50, or post-baccalaureate grade point average of 2.50 for a minimum of 14 units in residence. Post-baccalaureate students who hold degrees from other accredited institutions, and who have not yet taken 14 units but are otherwise qualified, may meet this requirement with an undergraduate g.p.a. of 2.50 for the last 90 quarter units.

(6) Earn a grade of *C* or better in all required education courses. Any education course with a grade below *C* must be repeated, or an approved substitute course taken.

(7) Satisfy the advanced composition requirement by objective or essay examination. No more than four attempts will be permitted, with a maximum of two on an objective examination.

(8) Complete a minimum of 12 units of work at Cal State L.A.

(9) Complete the course prerequisites for Elementary Education 403 and 404 or 465; Secondary Education 442ABCD, or Special Education 407, as listed in the course descriptions.

(10) For applicants to elementary directed teaching, show proficiency in art, music, and

physical education, either by examination or completion of appropriate courses. New transfer students must complete one curriculum course at Cal State L.A.

(11) For applicants to secondary directed teaching, hold a bachelor's degree and be approved by the department in each subject for which they will be assigned to directed teaching.

(12) For applicants to early childhood directed teaching, complete Elementary Education 461 and receive approval of the committee on directed teaching of the faculty in Child Development.

(13) For applicants completing an area of specialization in special education, be approved by the Department of Special Education. Concurrent assignments in the student's teaching major field and in special education may be arranged.

(14) Demonstrate suitable aptitude and fitness for teaching and for adjustment to public school conditions. This factor may be determined by test, interview, and other evaluations.

(15) Show evidence of personality and character traits in keeping with the standards of the profession. Specific attention will be directed to physical appearance, poise, dress, vitality, social attitudes, temperament, and integrity.

Students meeting all of the criteria listed above will be approved for directed teaching. Because of the amount of time and work required of students in directed teaching, they are advised to restrict the number of units in their programs and to curtail out-of-school workloads for the duration of such assignments.

Post-baccalaureate Year

State of California credential requirements include a fifth year of study completed after the baccalaureate degree. Students may elect to complete all or part of their professional requirements in the fifth year, pursue a master's degree, or follow a planned course of study approved by their adviser.

Credential Candidacy

Students in the post-baccalaureate credential year who complete directed teaching at Cal State L.A. and are eligible for the University-recommended preliminary credential are formally advanced to candidacy in the teaching credential program. Transfer students with preliminary credentials are advanced to candidacy upon completion of admissions requirements given above and satisfaction of the advanced composition requirement.

University recommendation for the *clear* credential will be granted upon satisfaction of the following requirements completed in post-baccalaureate status:

- (1) Advancement to candidacy in the credential program.
- (2) Minimum of 45 units, of which a minimum of 24 units must be taken in residence.
- (3) Maximum of 9 units in approved extension courses. (300–400 level University of California extension courses are approved only in extraordinary circumstances.)
- (4) Minimum of 9 units in Education courses.
- (5) Satisfaction of all statutory and Administrative Code requirements.

Departmental Course Prefixes

Courses of instruction in the School of Education are listed under each of the departments except for interdepartmental courses, as follows: Educational Administration (EDAD); Educational Foundations (EDFN); Elementary Education (EDEL); Guidance and Pupil Personnel Services (EDGC); Secondary Education (EDSE); Special Education (EDSP); and interdepartmental (EDUC).

Courses in Education

Upper Division Courses

Upper division standing and completion of a course in principles of psychology are prerequisite. Course numbers preceded by an asterisk () may not be applied toward requirements for the master's degree.*

435 Diagnosis and Remedial Reading Procedures for Classroom Teachers (5)

Prerequisite: Elementary Education 400 or 411 or Secondary Education 423. Causes and nature of reading difficulties as found in classroom, and procedures for diagnostic and remedial treatment by classroom teacher at both elementary and secondary levels.

449 Developing English Reading Skills in Bilingual/Cross-cultural Individuals (4)

Prerequisite: Elementary Education 400 or Secondary Education 423 or teaching credential or consent of instructor. Recommended as prior or concurrent: Chicano Studies 101AB and 111AB or Pan-African Studies 251AB and 425 or History 102CD or Secondary Education 425. Procedures and materials for reading instruction as applied to language and cultural characteristics of bilingual or cross-cultural individuals.

453 Teaching in Bilingual/Cross-cultural Schools (4)

Prerequisite: Teaching credential or consent of instructor. Specialized teaching techniques and materials for bilingual/cross-cultural schools. School and community field assignments.

455 Methods of Teaching Reading in Target Language (4)

Prerequisites: Admission to Bilingual/Cross-cultural Credential program, including proficiency in target language at 300B level; Educational Foundations 413 and either Elementary Education 400 or Secondary Education 423. Teaching reading, kindergarten through grade 12, in target language to speakers of that language or to speakers of English in bilingual programs. Instruction partly in target language.

455Ch Methods of Teaching Reading in Chinese

455Ja Methods of Teaching Reading in Japanese

455Sp Methods of Teaching Reading in Spanish

457 Problems in Teaching and Learning Second Language (4)

Prerequisite: Teaching credential or consent of instructor. Major problems in teaching and learning a second language at elementary and secondary school levels. Techniques and material for performance-based audiolingual instruction.

489 Demonstration of Instructional Competencies (2-12)

Prerequisite: Approval of department chairperson or designee. Demonstration of competencies related to instructional skills specified for components leading to completion of approved credential, certificate, or degree program requirements. May be repeated for credit with departmental approval. Grade CR/NC only.

490 Problems in Education (2-5)

Prerequisite: Consent of instructor. Investigation and study of unique problems in education. Specific subject announced in *Schedule of Classes*. May be repeated for credit as subject matter changes.

494 Open Education (4)

Investigation of open education historically, philosophically, and practically. Students experience open education in college setting and may be involved as observers and facilitators in public school setting.

495 Open Education: Curriculum and Methods (4)

Prerequisites: Education 494 or consent of instructor; enrollment in teacher education or teaching credential program. Methods, procedures, and curriculum in open classroom setting; practice in establishing open classroom environment.

498 Career Education for Metropolitan Schools (4)

Relationship of career education objectives to educational philosophy, curricula, instruction, and evaluative practices in metropolitan school settings.

499 Undergraduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Project selected in conference with sponsor before registration. Progress meetings held regularly and final report submitted. May be repeated for credit.

Educational Foundations

The Department of Educational Foundations offers programs leading to the Bilingual/Cross-cultural credential with Afro-American, Chicano, Chinese, and Japanese options and programs leading to the Master of Arts degree in Education, with options in Educational Foundations and Urban Education. For a description of these programs, see the *Graduate Programs* section.

The Faculty

Professors: Georgia Sachs Adams, Arthur A. Attwell, Jeanne McLeod Guertin, Burton Henry, Colleen B. Jamison, Lois V. Johnson, Charles F. Leyba, Robert R. Morman, Julian B. Roth (Chairperson), Rolando A. Santos, Carleton B. Shay, Edwin Wandt.

Associate Professors: Webster E. Cotton, Lamar Price, Fred Pirczak, Jr., Patricia Bates Simun, Elfleda J. Tate.

Assistant Professor: Helen Isabel Nicklin.

Courses in Educational Foundations

Upper Division Courses

Upper division standing and completion of a course in principles of psychology are prerequisite. Course numbers preceded by an asterisk () may not be applied toward requirements for the master's degree.*

409 Tests, Measurements and Evaluations (4)

Basic principles of educational measurement and evaluation; teacher-devised instruments and techniques; selection and interpretation of standardized tests; methods of marking and reporting.

*413 Psychological Foundations of Education (4)

Prerequisite or corequisite: Admission to credential program. Psychological research and theory in human learning and development related to educational processes.

*414 Social Foundations of Education (3)

Social issues related to educational processes in the United States.

437 Education and Intergroup Relations (4)

Implications of community intergroup problems for schools, teachers, and administrators; educational problems resulting from *de facto* segregation, cultural differences, racial and ethnic discrimination, urbanization.

443 Anthropology and Education (4)

(Also listed as Anthropology 443)

Prerequisite: Anthropology 250 or consent of instructor. Education in cross-cultural perspective; application of anthropological concepts and knowledge to understanding of educative process.

452 Statistics in Education (4)

Prerequisite: One year of algebra. Introduction to descriptive and inferential statistics basic to understanding and conducting educational research, including measures of central tendency, variability, covariability, sampling theory, interval estimation, testing statistical hypotheses.

490 Problems in Educational Foundations (2-5)

Prerequisite: Consent of instructor. Investigation of unique problems in educational foundations. Specific subject announced in *Schedule of Classes*. May be repeated for credit as subject matter changes.

Elementary Education

The Department of Elementary Education offers courses appropriate for pre-service and in-service preparation of teachers in the elementary grades, and programs of directed teaching for candidates for the teaching credential with authorization in multiple subjects instruction. The Master of Arts degree program is described in the *Graduate Programs* section.

The Faculty

Professors: Constance E. Amsden, Dan Cappa, Doris C. Ching, Earl W. Denny (Chairperson), Jewell Garner, John O. Jones, Roderick G. Langston, Helen R. Powell, Helen B. Truher, Wanda M. Zinsmaster.

Associate Professors: Harold C. Brown, Alan N. Crawford, Norman L. Ellenberg, Gloria S. Graham, David M. Greene, J. Dennis Heim, Jerome A. Hutto, Raquel Montenegro, Donald A. Nielsen, June D. Oxstein, Edythe Rodriguez, Bernice B. Smith.

Assistant Professors: Mary Ann Alia, Ratna Appadurai, Dorothy Keane, Aaron Kriegel, Judith M. Washburn.

Lecturer (under special contract with the Los Angeles Unified School District): Ruth Richmond.

Elementary Teaching Credential

The teaching credential with authorization in multiple subject instruction qualifies the holder to teach in any self-contained classroom, preschool or kindergarten, grades 1 through 12, or in classes organized primarily for adults.

Requirements for Preliminary Credential

Applicants must complete the following requirements for the University-recommended credential:

- (1) Hold a bachelor's degree from an accredited college or university.
- (2) Be formally admitted to the credential program and complete the professional education requirements given below. See *Admission to Credential Programs and Directed Teaching*, pages 107 and 108.
- (3) Achieve a satisfactory score on the Multiple Subjects Examination, as prescribed by the Commission for Teacher Preparation and Licensing, or complete a program approved for waiver of this examination.
- (4) Demonstrate competence in advanced composition.

Requirements for Clear Credential

Applicants must complete the following requirements for the University-recommended credential:

- (1) Satisfy requirements for the preliminary credential.
- (2) Be advanced to candidacy in the credential program. See page 108.

(3) Complete a minimum of 45 units in post-baccalaureate study, including 9 units in Education. A minimum of 24 units must be in residence and a maximum of 9 units may be in approved extension courses. Only Cal State L.A. 300-, 400-, or 500-level courses or their equivalents will satisfy this requirement.

(4) Satisfy the State requirement for course work in health education, including the physiological and sociological effects of the use of alcohol, narcotics, and drugs, and the use of tobacco.

(5) Satisfy the United States Constitution requirement, either through courses or examinations.

PROFESSIONAL EDUCATION REQUIREMENTS

A total of 43 units is required, as follows:

In Elementary Education:

- 400 Proseminar: Curriculum and Teaching of Reading (4)
- 401 Proseminar: Curriculum and Teaching of Mathematics and Language Arts (4)
- 402 Proseminar: Curriculum and Teaching of Social Science and Science (4)
- 403 Student Teaching I: Multiple Subjects (12)
- 404 Student Teaching II: Multiple Subjects (12)

In Educational Foundations:

- 413 Psychological Foundations of Education (4)
- 414 Social Foundations of Education (3)

ADDITIONAL REQUIREMENTS

Students must demonstrate competence in art, music, and physical education for elementary school, either through proficiency examinations or by successful completion of the following courses:

In Art:

- 400 Development of Literacy in Visual Arts (3)

In Music:

400 Development of Perception in Musical Arts (4)

In Physical Education:

420 Movement Experiences in Growth and Development (3)

Courses in Elementary Education***Upper Division Courses***

Upper division standing and completion of a course in principles of psychology are prerequisite. Course numbers preceded by an asterisk () may not be applied toward requirements for the master's degree.*

***400 Proseminar: Curriculum and Teaching of Reading (4)**

Prerequisites: Admission to credential program and Educational Foundations 413 (may be taken concurrently). Analysis, application, evaluation of strategies for teaching reading in various socioeconomic milieus, emphasizing comprehension, phonics, and other decoding and encoding skills. Laboratory and tutorial experiences in a field setting.

***401 Proseminar: Curriculum and Teaching of Mathematics and Language Arts (4)**

Prerequisites: Admission to credential program and Educational Foundations 413 (may be taken concurrently), and Mathematics 120AB, each with a grade of C or better. Analysis, application, evaluation of strategies for teaching mathematics and language arts in various socioeconomic and cultural milieus. Laboratory experience provided.

***402 Proseminar: Curriculum and Teaching of Social Science and Science (4)**

Prerequisites: Admission to credential program and Educational Foundations 413 (may be taken concurrently). Analysis, application, evaluation of strategies for teaching social science and science in various socioeconomic and cultural milieus. Laboratory experience provided.

***403 Student Teaching I: Multiple Subjects (12)**

Prerequisites: See *Directed Teaching* requirements, p.108; Elementary Education 400, 401, 402; Educational Foundations 413. On-site laboratory experience consisting of teaching multiple subjects under direction of University supervisor with cooperation of supervising classroom teacher(s). Concurrent weekly seminar. Graded CR/NC only.

***404 Student Teaching II: Multiple Subjects (12)**

Prerequisites: Elementary Education 403 and Educational Foundations 414 (may be taken concurrently). On-site laboratory experience consisting of teaching multiple subjects under direction of University supervisor with cooperation of supervising classroom teacher(s). Concurrent weekly seminar. Graded CR/NC only.

411 Current Issues and Trends in Reading (4)

Prerequisite: Teaching experience or consent of instructor. Exploration, analysis, interpretation of new teaching trends and issues in reading with emphasis on bilingual and cross-cultural needs.

412 Word Perception Skills (4)

Prerequisites: Teaching credential and teaching experience. Advanced study of word perception skills and their relation to development of independence in reading and developmental reading process; current programs of word perception, word analysis, and modern phonics systems, especially as they relate to bilingual and cross-cultural problems. Open to both elementary and secondary teachers.

421 Teaching Language Arts in Elementary School (4)

Prerequisite: Teaching experience or consent of instructor. Intensive study in teaching language arts in elementary school; exploration, analysis, interpretation, and implementation of modern teaching trends and issues, with urban emphasis.

422 Teaching Foreign Language in Elementary School (4)

Prerequisite: Teaching experience or consent of instructor. Intensive study in teaching foreign language in elementary school; exploration, analysis, interpretation, and implementation of modern teaching trends and issues in multi-cultural urban setting.

424 Methods of Using Creative Dramatics with Children (3)

Prerequisite: Speech Communication 490. Methods of using creative dramatics with elementary school-age children. A preservice or inservice course for librarians, teachers, recreation and community leaders.

431 Teaching Modern Mathematics in Elementary School (4)

Prerequisite: Elementary Education 401 or equivalent. Exploration and analysis of modern teaching trends and materials in mathematics; emphasis on problems specific to urban areas and on discovery-activity techniques for intermediate grade children.

432 Teaching Mathematics for Early Childhood (4)

Prerequisite: Mathematics 120AB or teaching experience. Professional course presenting methods and materials for teaching mathematics to children, pre-kindergarten through grade three.

433ABCD Special Topics in Mathematics for Elementary Teachers (1-1-1-1)

Prerequisite: Elementary Education 401 or equivalent. Instructional laboratory for elementary teachers; current strategies, materials, and terminology for teaching specific strands from Mathematics Framework for California Public Schools.

434AB Problems in Individualizing Instruction in Elementary School (2-2)

434A Reading (2)
434B Mathematics (2)

Prerequisite: Admission to credential or master's degree program in Education or appropriate field-related experience. Examination of strategies for individualizing instruction in elementary school, including diagnos-

ing individual needs, prescribing learning activities, preparing and organizing materials, evaluating outcomes, and implementing program in elementary school classroom.

441 Teaching Social Studies in Elementary School (4)

Prerequisites: Educational Foundations 413, 414; Elementary Education 400, 401, 402; or consent of instructor. Exploration, analysis, interpretation of modern teaching trends and issues in social studies, with an urban emphasis. Does not meet Elementary Education 400, 401, 402 requirement in professional education.

451 Teaching Science in Elementary School (4)

Prerequisite: Teaching experience or consent of instructor. Intensive study in teaching science in elementary school; exploration, analysis, interpretation, and implementation of modern teaching trends, issues, and materials, with urban emphasis.

461 Curriculum Procedures and Materials for Early Childhood Education (6)

Prerequisite: Educational Foundations 413 or consent of instructor. Curriculum, instructional procedures, materials in early childhood education. Study of selected nursery schools and children's centers, including three hours per week observation.

462 Dynamics of Play in Early Childhood Education (4)

Prerequisite: Educational Foundations 413 or equivalent. Dynamics of group and individual play, focus on increased understanding of children's behavior. Observation in selected pre-kindergarten classes for minimum of two hours per week.

463 Kindergarten-Primary Education (6)

Prerequisites: Admission to credential program; Educational Foundations 413; Elementary Education 400, 401, 402 (may be taken concurrently). Principles, curriculum, methods and materials of instruction; teacher-parent relations, observation of children in kindergarten and first three grades. Emphasis on inner-city problems.

464 Pre-kindergarten Education in Metropolitan Areas (4)

Corequisite: Educational Foundations 437. Selection of objectives, student population, curriculum content, materials and instructional procedures for teachers in public pre-kindergarten schools in various socioeconomic and cultural milieus.

***465 Directed Teaching: Pre-School (12)**

Prerequisites: Elementary Education 461 and 462; see section on Directed Teaching for multiple subjects credential in a pre-kindergarten setting. Directed teaching for credential at pre-school level. Graded CR/NC only.

466 Cultural Diversity in Early Childhood Classroom: Needs and Opportunities (4)

Prerequisites: Enrollment in teacher education program (Elementary or Early Childhood Education); teaching experience with young children. Workshop involving cross-cultural perspective on urban preschools, children's centers, primary grades in elementary school; role of cultural contributions of diverse communities in child's self-image and learning ability.

490 Problems in Elementary Education (2-5)

Prerequisite: Consent of instructor. Investigation of unique problems in elementary education. Specific subject announced in *Schedule of Classes*. May be repeated for credit as subject matter changes.

Guidance and Pupil Personnel Services

Programs in guidance and pupil personnel services are designed to develop professional competencies in school psychology and counseling. Programs are structured so that a credential with a specialization in pupil personnel services may be acquired concurrently. These graduate programs are described in the *Graduate Programs* section.

The Faculty

Professors: Robert B. Benoit, David Bilovsky, John A. Dahl, Robert Hadley, Edmond C. Hallberg, Raymond E. Hillis (Chairperson), Jane E. Matson, Donald G. Mortensen, Fred G. Rhodes, J. Leonard Steinberg, Joseph Stubbins.

Associate Professors: Isaac Berman, Shirlee B. Davis, Saul C. Kupferman, G. Roy Mayer.

Assistant Professors: Richard Batdorf, Fernando A. Hernandez, Genevieve R. Meyer, Barry Miller.

Courses in Educational Guidance

101 Career Decision-Making (3)

Development of decision-making skills applied to college major and career objectives. Graded CR/NC only.

Upper Division Courses

Upper division standing and completion of a course in principles of psychology are prerequisite.

403 Behavioral Intervention Strategies for Pre- and Primary School Children (4)

Prerequisites: Speech Communication 456; Psychology 412A or Educational Foundations 413 or Home Economics 220; Psychology 433 or Educational Guidance 405A. Operant and social learning procedures applied to pre- and primary-school children in classroom and home.

405AB Theoretical and Developmental Aspects of Behavior (4-4)

Personality theories; vocational, cognitive and personal-social theories of development; developmental data from all phases of life span. 405A: gestation through pubescence; 405B: pubescence through senescence.

430 Test Construction (3)

Prerequisite: Educational Foundations 452. Theory and methods of test construction, validation, and utilization in counseling. Emphasis on statistical, heuristic, and other considerations underlying development and use of assessment devices for evaluation and prediction.

445 Developmental Self Exploration (1)

Prerequisite: Concurrent enrollment in Educational Guidance 405A recommended. Self-evaluation of dynamics of developmental and vocational choices. Graded CR/NC only.

446 Occupational Analysis and Information (3)

Classification of occupations according to various criteria; occupational, educational, and social information in counseling; job analysis and its uses; placement programs and techniques.

450 Counseling Theories (3)

Prerequisite: Psychology 418A or Guidance 405AB (may be taken concurrently). Theories of behavioral change appropriate for individual and group counseling; functions of theory in research and practice of counseling. Background for subsequent training in individual and group methods of counseling.

460 Laws Relating to Children and Child Welfare (4)

How society protects and cares for children; child welfare laws, their origin and application.

467ABC Medical Aspects of Disability (3-3-3)

Prerequisite: Admission to Rehabilitation Counseling program or consent of instructor. Rehabilitative implications of major physical and psychiatric conditions leading to disablement; etiology, therapy, and prognosis of rehabilitation. Classroom demonstrations and field trips.

480 Fundamentals of Counseling and Guidance (3)

Prerequisite: Senior or graduate standing. General orientation to factors involved in understanding individual students and in functioning of pupil personnel program.

483 Elementary School Guidance (4)

General orientation to guidance principles and practices used in elementary schools; training in guidance functions not normally performed by elementary school counselors or psychometrists.

484 School-Family Interpersonal Relations (4)

Dynamics of family, pupil-teacher, teacher-parent, and pupil-pupil relationships, including methods and materials of family counseling, group work, home visits, parent conferences, and problems of home and school.

490 Problems in Guidance (2-5)

Prerequisite: Consent of instructor. Investigation of unique problems in guidance. Specific subject announced in *Schedule of Classes*. May be repeated for credit as subject matter changes.

Library Science

The Library Services credential program authorizes service as a school librarian in both elementary and secondary schools, and is approved by the Commission for Teacher Preparation and Licensing.

Courses in Library Science are taught in the School of Education. The faculty for this post-baccalaureate program is provided by the School of Education, the Department of English, the John F. Kennedy Memorial Library and school libraries, with Marilyn W. Greenberg, Assistant Professor of Education, serving as Coordinator.

Courses in Library Science

400 Selection and Acquisition of Instructional Materials (4)

Philosophy and practice of building a library collection. Study of all types of library materials: books, pamphlets, periodicals, picture maps, filmstrips, and tapes.

401 Principles of School Library Media Services (4)

Prerequisites: Admission for admission to school library credential program. Introduction to school library philosophy, organization, and administration; new roles of school library in learning process.

402 Cataloging and Classification of Instructional Materials (4)

Theory and methods of organizing books and other materials. Classification, cataloging, and choice of subject headings. Lecture 3 hours, laboratory 3 hours.

406 Basic Reference Materials and Services (4)

Techniques of developing reference service. Study and examination of reference tools necessary to build an adequate collection.

408 Bibliography (4)

Basic bibliographic form; principles of book selection in humanities, social sciences and sciences.

450 School Librarian: Media Specialist Fieldwork (6)

Prerequisites: Admission to librarianship credential program; must be taken in final quarter of course work applied to this credential. Application of factors involved in media programs within public schools; supervised field experience in media centers.

451 Seminar: School Library Services (3)

Prerequisite: Library Science 450 (may be taken concurrently), or consent of instructor. Restricted to librarianship credential candidates who have completed all other program requirements. Comprehensive review of school library media center problems, their solutions or alleviations. May be repeated to maximum of 6 units.

Secondary Education

The Department of Secondary Education offers courses appropriate for pre-service and in-service preparations of teachers in the secondary schools, and programs of directed teaching for candidates for the teaching credential with authorization in single-subject instruction.

Master's degree programs related to secondary school teaching are described in the *Graduate Programs* section.

The Faculty

Professors: Norman D. Berke, Morris Better, Robert J. Forbes, Robert O. Hahn, Dale L. Knapp, L. Rogers Liddle, Delwyn G. Schubert, Randolph G. Service, Carol J. Smallenberg, Harry K. Thrasher, Philip D. Vairo, Marian E. Wagstaff.

Associate Professors: John M. Austin, James A. Bolton, Noel Lawrence, Francisco Lemus-Serrano, Albert Allen Lindquist (Chairperson), John L. Townley.

Assistant Professors: Kathleen M. Costantini, Marilyn W. Greenberg, Robert D. Pellant.

Inspector: Harford Bridges.

Lecturer (under special contract with the Los Angeles Unified School District): Robert A. Martin.

Secondary Teaching Credential

The teaching credential with authorization in single subject instruction qualifies holders to teach in their authorized field at any grade level, in preschool, kindergarten, and grades 1 through 12, or in classes organized primarily for adults. Fourteen categories of single subject instruction are defined by State legislation, as follows: English, physical science, life science, mathematics, social science, government, history, industrial arts, physical education, business, music, art, home economics, and languages, including, but not limited to, Chinese, French, German, Russian, and Spanish.

Students considering work toward the Single Subject Credential are urged to obtain advisement early from faculty advisers in their academic areas and in the Department of Secondary Education.

Requirements for Preliminary Credential

Applicants must complete the following requirements for the University-recommended credential:

- (1) Hold a bachelor's degree from an accredited college or university.
- (2) Be formally admitted to the credential program and complete professional education requirements given below. See *Admission to Credential Programs* and *Directed Teaching*, pages 107 and 108.
- (3) Achieve a satisfactory score on a single-sub-

ject examination, as prescribed by the Commission for Teacher Preparation and Licensing, or complete a program approved for waiver of the examination.

- (4) Demonstrate competence in advanced composition.

Requirements for Clear Credential

Applicants must complete the following requirements for the University-recommended credential:

- (1) Satisfy requirements for the preliminary credential.
- (2) Be advanced to candidacy in the credential program. See page 108.
- (3) Complete a minimum of 45 units in post-baccalaureate study, including 9 units in Education. A minimum of 24 units must be in residence, and a maximum of 9 units may be in approved extension courses. Only Cal State L.A. 300-, 400-, or 500-level courses or their equivalents will satisfy this requirement.
- (4) Satisfy the State requirement for course work in health education, including the physiological and sociological effect of the abuse of alcohol, narcotics, and drugs, and the use of tobacco.
- (5) Satisfy the United States Constitution requirement, either through courses or examinations.

PROFESSIONAL EDUCATION REQUIREMENTS
A total of 45 units is required, as follows:

In Secondary Education:

- 401AB Instructional and Curricular Strategies:
Metropolitan Secondary Teaching (3-3)

- 421 Special Instructional Methods in Secondary School Subjects (3)
- 423 Developmental Reading in Metropolitan Secondary Schools (4)
- 442ABCD Directed Teaching in Metropolitan Secondary Schools (5-5-7-7)
- 450A Instructional Materials Preparation Laboratory (1)

In Educational Foundations:

- 413 Psychological Foundations of Education (4)
- 414 Social Foundations of Education (3)

Courses in Secondary Education

Lower Division Courses

200 The Teaching Profession (1)

Introduction to teaching as a professional career. Information related to entry into teaching profession. Scheduled visitations to variety of elementary and secondary schools; assignment as teacher aide. Recommended for all students interested in California teaching credential. May be repeated to maximum of 3 units. Graded CR/NC only.

Upper Division Courses

Upper division standing and completion of a course in principles of psychology are prerequisite. Course numbers preceded by an asterisk () may not be applied toward requirements for the master's degree.*

*401AB Instructional and Curricular Strategies: Metropolitan Secondary Teaching (3-3)

401A: Prerequisites: Educational Foundations 413 (may be taken concurrently); concurrent enrollment in Secondary Education 450A required. Basic skills required for structured observation and accomplishment of developmental teaching tasks for metropolitan schools.

401B: Prerequisite: Secondary Education 401A. Teaching skills, curriculum design principles, and evaluative practices in metropolitan secondary schools.

*403 Curriculum in Metropolitan Secondary Schools (3)

Curriculum in secondary education: aims and scope of modern secondary school practices, current issues in curriculum development. Credit not granted for both Secondary Education 401AB and 403.

*421 Special Instructional Methods in Secondary School Subjects (3)

Prerequisites: Secondary Education 401AB (may be taken concurrently); and as specified below. Series of professional courses intended for prospective secondary teachers in indicated subject fields. Each candidate for a single subject credential must complete at least one methods course appropriate to chosen teaching field; course should be taken prior to Secondary Education 442CD.

- 421Ar Methods of Teaching Art
- 421Bb Methods of Teaching Bookkeeping

Prerequisite: Business 410AB.

- 421Bd Methods of Teaching Distributive Education Subjects

Prerequisites: Business 113, 304, 340 or 341, 344, 410AB. Methods and materials of teaching such high school subjects in the field of distribution as retailing, salesmanship, advertising, merchandising, and display. Establishment of cooperative work experience programs also considered.

- 421Bg Methods of Teaching General Business Subjects

Prerequisite: Business 410AB

- 421Bs Methods of Teaching Shorthand

Prerequisites: Business 311 and 410AB; also 421Bt, taken concurrently or prior to 421Bs.

- 421Bt Methods of Teaching Typewriting

Prerequisites: Business 211 and 410AB.

- 421En Methods of Teaching English and Language Arts

Prerequisites: English 401, and either 406 or 410; completion of all but two courses in English program for Single Subject Credential.

- 421Fl Methods of Teaching Foreign Language

Prerequisite: Six upper division units of the language.

- 421HS Methods of Teaching Health and Safety Education

- 421HE Methods of Teaching Home Economics

- 421IE Methods of Teaching Industrial Education

Prerequisite: Industrial Studies 300AB.

- 421Ma Methods of Teaching Mathematics

- 421Mu Methods of Teaching General Music

Prerequisite: Music 340.

- 421PE Methods of Teaching Physical Education

- 421SCD Methods of Teaching Speech Communication and Drama

- 421Sc Methods of Teaching Science

- 421SS Methods of Teaching Social Science

423 Teaching Reading in Metropolitan Secondary Schools (4)

Prerequisite: Admission to credential program. Development and corrective techniques for improvement of reading in secondary schools. Reading in content areas. Teaching learning laboratory experiences.

425 Teaching of English as Second Language (5)

Prerequisite: Teaching credential, Secondary Education 421, or consent of instructor. Instructional procedures, materials, theory and problem involved in teaching English to speakers of other languages.

- 425TA Teaching English to Adult Speakers of Other Languages (5)

Special section limited to teaching of adults.

*442ABCD Directed Teaching in Metropolitan Secondary School (5-5-7-7)

Prerequisites: For 442AB, see page 000 for Directed Teaching requirements; Secondary Education 401AB must be taken concurrently. For 442CD, Secondary Education 401AB and 442AB; 421 also is prerequisite to 442CD in art, business education, foreign languages, home economics, industrial studies, music, and physical education; may be taken concurrently for directed teaching in all other subjects. For 442D, Educational Foundations 413 also is prerequisite (may be taken concurrently). Supervised teaching in public secondary schools. Secondary Education 442AB requires 10 hours per week of classroom experiences in an assigned

school. Secondary Education 442CD includes 15 hours directed teaching and one seminar per week for each school assignment. Graded CR/NC only.

450AB Instructional Materials Preparation Laboratory (1-1)

Prerequisite: Students enrolled in Secondary Education 401A must enroll concurrently in 450A; 450B may be elected in any subsequent quarter; other students may elect this course at their option. Production and care of audiovisual materials. Laboratory 2 hours.

451 Instructional Media Techniques (4)

Methods and techniques of using audiovisual equipment and materials in communication; type, source, selection, teaching techniques and evaluation of materials. Two hours laboratory per week required in operation of equipment. Credit may be received for Secondary Education 451 in addition to Secondary Education 401AB; completion of machine laboratory requirement in 401AB satisfies laboratory requirement for this course.

453 Instructional Technology and Programmed Instruction (4)

Prerequisite: Teaching experience or consent of instructor. Development of technology in instructional process; emphasis on auto-instructional methods, devices, and programmed instruction; laboratory practice with existing programs designed for use in school, industry, and home.

460 Library Procedures for Classroom Teacher (4)

School library media center as resource for materials, equipment, and services for elementary and secondary teachers. Does not satisfy requirements for library services credential.

471 Methods and Materials of Adult Education (3)

Basic methods of adult education, relationship of subject

matter and teaching methods. Required for renewal of adult education credential.

472 Principles of Adult Education (3)

Basic principles of adult education, social and philosophical significance of adult education; history and description of past and present movements in adult education. Required for renewal of adult education credential.

476 Curriculum Construction for Adult Classes (3)

Selection and organization of subject matter for adult students, organization of concise teaching units, definition of educational goals, selection of supplementary and reference materials.

477 Counseling and Guidance Procedures in Adult Schools (3)

Prerequisites: Valid adult education credential, experience as teacher of adult education classes, or consent of instructor. Nature of problems of adult students, counselor's role in adult education, counseling methods and techniques.

478 Organization, Administration and Supervision of Adult Education (3)

Prerequisite: Valid adult education credential, experience as teacher of adult classes, or consent of instructor. Procedures for administration and supervision of classes and schools for adults.

490 Problems in Secondary Education (2-5)

Prerequisite: Consent of instructor. Investigation of unique problems in secondary education. Specific subject announced in *Schedule of Classes*. May be repeated for credit as subject matter changes.

491 Problems of Junior High and Middle Schools in Metropolitan Areas (4)

Prerequisite: Teaching credential or consent of instructor. Current trends and problems of American junior high school.

Special Education

Curricula in Special Education are designed to prepare personnel for delivery of educational service to individuals who deviate in physical, behavioral, and mental characteristics to the extent that they require special instruction or special services. Specialized preparation is offered for teachers of these exceptional individuals, for speech and hearing specialists, and for administrators and supervisors of special education programs.

The graduate programs in Special Education, which include two Master of Arts degrees and the Ph.D. offered jointly with the University of California, Los Angeles, are described in the *Graduate Programs* section.

The Faculty

Professors: Gary A. Best, Barbara J. Clark, Janet Jeffers, Donald B. Kinstler, C. Lamar Mayer (Chairperson), Harry V. Wall.

Associate Professors: Robert A. Eisenberg, M. Patricia Simmons, Rose Marie Swallow, F. Annette Tessier, Alice Watkins.

Assistant Professors: Abraham Ariel, Virginia Beyer, Richard G. Lewis, Judith Margolis, James S. Stanfield.

Lecturers: Ronald Chu Chan, May Chin, Anne V. Galloway, Frances Liau, Nancy Rodarte, Kent Wardell.

Advisement

Students should seek advisement for all credential and graduate programs in Special Education, except Speech and Hearing, and Aphasic and Severely Oral Language Handicapped, through the Department of Special Education. Advisement for Speech and Hearing is provided by the Department of Speech Communication and Drama.

Credential Program Areas

Programs for all Special Education Specialist areas defined by the Teacher Preparation and Licensing Act of 1970 have been approved for offering at Cal State L.A. Options available under previous legislation are available to qualified students who can complete requirements by September 15, 1976.

Three basic patterns of special education credential programs currently are being offered, as follows:

Option A: Special Education Specialist Credential

This program must be followed by those who possess or are earning concurrently a multiple or single subject teaching credential. The option also is available to those who possess or can qualify for a basic teaching credential authorized under previous legislation. Areas of Special Education preparation under this option are:

Communication Handicapped: Speech and hearing, aphasic and severely oral language handicapped, deaf and severely hard of hearing and deaf-blind.

Physically Handicapped: Blind and partially seeing and orthopedically handicapped, including crippled and other health impaired.

Learning Handicapped: Learning disabilities, behavior disorders and educationally retarded.

Severely Handicapped: Trainable mentally retarded, severely multiple handicapped, seriously emotionally disturbed, and autistic.

Gifted

Option B: Specialized Preparation Minor

This program, available only to students who possess or can qualify for a basic teaching credential authorized by legislation prior to Teacher Preparation and Licensing Act of 1970, is being phased out. It is described only in previous issues of the *General Catalog*.

Departmental approval must be obtained for entry into this option.

Areas of specialization are as follows:

*Deaf and Severely Hard of Hearing
Mentally Retarded (EMR and TMR)
Orthopedically Handicapped
Visually Handicapped
Supervision of Special Education*

Option C: Restricted Credential

This program is open only to students who qualify under provisions of pre-1970 legislation. This credential authorizes service only in the following specific areas of preparation:

- Deaf and Severely Hard of Hearing*
- Deaf-Blind*
- Mentally Retarded (Educable)*
- Mentally Retarded (Trainable)*
- Orthopedically Handicapped*
- Visually Handicapped*
- Orientation and Mobility for Visually Handicapped*
- Speech and Hearing Specialist*

Admission to Credential Programs

In addition to formal admission to the School of Education credential program, students desiring to enter a credential program in Special Education must apply to the Department of Special Education. Application forms and information on procedures are available in the Department of Special Education Office. Also see *Admission to Credential Programs and Directed Teaching*, pages 107 and 108.

Courses in Special Education

Upper Division Courses

Upper division standing and completion of a course in principles of psychology are prerequisite. Course numbers preceded by an asterisk () may not be applied toward requirements for the master's degree.*

400 Education and Psychology of Exceptional Individuals (4)

Characteristics of and implications for education of individuals with exceptional needs; related current problems, trends, programs, legislation and community resources.

401 Atypical Development in Exceptional Individuals (3)

Prerequisite: Special Education 400. Deviations from normal sensory, motor, perceptual and mental development. Implications of deficit areas for learning; functional assessment and observations of exceptional individuals.

402 Curriculum and Instructional Strategies for Handicapped Individuals (4)

Prerequisites: Special Education 400; 401 and 403 (may be taken concurrently), or consent of instructor. Development of instructional strategies appropriate for exceptional individuals; current methodology and techniques of curriculum modification necessary to individualize instruction for handicapped.

403 Special Education Laboratory (1-5)

Prerequisites: Special Education 400; 401 (may be taken concurrently), or consent of instructor. Practicum field experience with exceptional individuals in designated areas of special education. Graded CR/NC only.

404 Teacher Guidance for Exceptional Individuals (2)

Prerequisite: Special Education 400. Problems of personal, educational and social adjustment affecting individuals with exceptional needs. Guidance techniques for teachers working with exceptional individuals and their families.

405 Career Preparation for the Handicapped (2)

Prerequisite: Special Education 404. Implications of handicapped conditions for career selection and preparation. Programs in schools and other agencies to develop career awareness, information and skills.

406 Observation in Special Education (1-2)

Prerequisite: Consent of instructor. Opportunity for firsthand experience with educational programs in special education. May be repeated to maximum of 4 units. Graded CR/NC only.

*407 Directed Teaching in Special Education (3-12)

Prerequisites: See page 000 for Directed Teaching requirements; twelve units of directed teaching in an area of special education, other than speech and hearing, may be used to satisfy requirement for equivalent amount on teaching credential. Assignments in city and county schools under supervision and guidance of qualified teacher and university supervisor. Graded CR/NC only.

408 Cognitive and Linguistic Processes in Exceptional Individuals (4)

Prerequisite: Speech Communication 456 or consent of instructor. Theories and sequences of cognitive and linguistic development; impact of sensory, motor, emotional, and mental factors on these processes.

420 Implications of Communication Handicaps (4)

Prerequisite: Special Education 400. Survey of educational, psychological, and vocational implications of communication handicaps; emphasis on impact of auditory impairment.

440 The Gifted Individual I (4)

Characteristics, needs and identification of gifted individuals, with emphasis on early nurture. Problems of personal, educational, and social development of gifted individuals; overview of current and innovative programs.

441 The Gifted Individual II (4)

Prerequisite: Special Education 440. Strategies for education of gifted individuals, pre-kindergarten through grade 12. Methods of assessment; program planning to meet individual needs; evaluation of development. Emphasis on developing higher cognitive skills, including techniques of inquiry, simulation, open structure, and problem solving.

450 Educational and Vocational Implications of Retardation (4)

Prerequisite: Psychology 406 (may be taken concurrently). Implications of retardation for education and for community and vocational adjustment; current programs, services and legal aspects. Observation in schools, workshops, and hospitals required.

460 Psychological, Sociological, and Vocational Implications of Physically Handicapped (3)

Psychological and sociological aspects of physically handicapped, including visually handicapped and crippled; related vocational problems and agency services.

461 Art, Music, and Recreation for Physically Handicapped (4)

Prerequisites: Special Education 400 and 462 or 465, or consent of instructor. Art, music, and recreation experiences relating to needs of physically handicapped children, including orthopedically and visually handicapped.

462 Survey of Physical Defects (3)

Prerequisite: Special Education 400 or consent of instructor. Physical defects commonly found among orthopedically handicapped children, accompanying defects of central nervous system damage, and resulting impairments in development.

465 Introduction to Vision (3)

Prerequisite: Special Education 400 or consent of instructor. Anatomy, physiology, and pathology of the eye; development of visual efficiency, use of low-vision aids; vision screening programs; assessment of visual perception problems.

466 Beginning Communications for Vision Impaired (3)

Prerequisites: Special Education 401, 402, and 403, or consent of instructor. Fundamentals of teaching specialized communication skills to vision-impaired children, including braille, typing, handwriting, slate and stylus; braille reading, and listening.

467 Advanced Communication for Visually Handicapped (3)

Prerequisite: Special Education 466. Fundamentals of advanced communication skills for vision-impaired children, including mathematical and scientific notations, foreign language, braille music, use of specialized equipment.

468 Adaptive Living Skills for the Visually Impaired (4)

Prerequisite: Special Education 460. Application of basic orientation and mobility skills to daily living activities for the blind, including assessment of concept formation, psychomotor development, spatial awareness, and directionality.

469 Psychological, Sociological and Vocational Implications of Blindness (3)

Prerequisite: Special Education 465. Psychological aspects of blindness, vocational assessment and employment possibilities, services of state and private agencies, integration of the blind into sighted society.

475 Orientation and Mobility for Blind (4)

Prerequisite: Consent of instructor or department. Orientation and independent travel techniques for congenitally and adventitiously blind under conditions simulating blindness. Emphasis on use of other senses and long cane technique. Lecture/discussion 2 hours, practicum 6 hours.

476 Advanced Mobility Instruction for Teachers of Blind (5)

Prerequisites: Special Education 468 and consent of instructor. Clinical practicum in application of basic techniques, interpretation and coordination of the sensorium; emphasis upon analysis of readiness, aptitude, development of environmental concepts; practicum in analysis of immediate environs.

480 Implications of Severe Handicaps (4)

Prerequisite: Special Education 400. Etiological, psychosocial, educational, and vocational aspects of severe handicaps in trainable mentally retarded, severely multi-handicapped, seriously emotionally disturbed, and autistic individuals.

481 Methods of Teaching Severely Handicapped (4)

Prerequisites: Special Education 400, 401, 402, 403. Current methods and techniques for assessing, teaching, and managing severely handicapped children (trainable mentally retarded, severely multi-handicapped, seriously emotionally disturbed, and autistic).

490 Problems in Special Education (2-5)

Prerequisite: Consent of instructor. Investigation and study of unique problems in special education. Specific subject announced in *Schedule of Classes*. May be repeated for credit as subject matter changes.

Audiology

This graduate program is offered jointly with the Department of Speech Communication and Drama. The degree program in the Department of Special Education emphasizes Audiology; Speech Pathology is offered by the Department of Speech Communication and Drama. Students interested in pursuing a program in both areas should seek advisement through either of the departments.

The Faculty

Professors: Janet Jeffers, Donald Kinstler.

Assistant Professor: Richard G. Lewis.

Courses in Audiology

Upper Division Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers.

400AB Hearing Science (2-2)

Concurrent enrollment in Audiology 401 required of students in Audiology program.

400A: Anatomy and physiology of hearing, including theories of hearing and the auditory pathway; anatomical transmission of air-conducted and bone-conducted sound.

400B: Acoustical characteristics of sound, including frequency, intensity, and measurement of sound; acoustic parameters of speech sounds; factors affecting intelligibility for the normal ear.

401 Observation in Audiology (1)

Concurrent enrollment in Audiology 400AB required. Observation of teachers, speech and hearing specialists, and in-service audiologists in schools, programs, or classes for hearing-impaired minors.

402 Principles of Audiology (4)

Prerequisite: Audiology 400AB; 440 must be taken concurrently by students in Audiology program. Introduction to audiology, pathologies of ear, pure tone threshold and screening audiometry. Interpretation of audiograms, including prediction of phoneme perceptions, description of tests for pseudohypoacusis and site of lesion.

403 Hearing for Speech (3)

Prerequisites: Audiology 400AB and 402 (402 may be taken concurrently); Speech Communication 461 or Special Education 522. Assessment of hearing loss; effect of loss on speech perception; application of diagnostic data; monitoring and troubleshooting hearing aids and auditory trainers. Lecture 2 hours, laboratory 3 hours.

404 Auditory Processing and Development of Listening Skills (4)

Prerequisites: Audiology 403; Speech Communication 461 or equivalent. Measurement, assessment and description of central hearing ability; detection of prob-

lems in auditory processing; figureground, speed of perception, sequencing and closure; prescriptive auditory training procedures.

405 Speech and Language Development and Remediation Hard-of-Hearing Child (3)

Prerequisites: Audiology 403 and 420; Speech Pathology 446. Planning prescriptive tutoring programs in speech and language for hard-of-hearing child: early and middle years.

406 Hearing Science and Measurement for Teachers of Hearing Impaired (4)

Prerequisite: Admission to program in education of deaf, deaf-blind, or multi-handicapped, or consent of instructor for students seeking credentials in areas of mental retardation, orthopedically handicapped, visually handicapped, supervision of special education, and orientation and mobility. Anatomy and physiology of hearing; acoustic characteristics of sound; pure-tone and speech audiometry; application of audiologic data to programs for profoundly deaf, deaf-blind, or multi-handicapped children.

420 Speechreading (3)

Prerequisites: Audiology 403; Speech Pathology 461 strongly recommended. Principles and methods of teaching speechreading, comparison of various speechreading systems, history of speechreading, preparation and presentation of units suitable for public school instruction. Lecture 2 hours, laboratory 2 hours.

423 Pre-Clinical Procedures in Audiology (3)

Prerequisites: Audiology 441 and 444, and Speech Pathology 437, or equivalents. Clinical procedures in audiology designed to prepare students for evaluation and therapy of hearing handicapped children and adults; diagnostic methods for evaluation of speech and language.

429 Clinical Practice in Aural Rehabilitation (1)

Prerequisites: Audiology 405, 420 and 441. Students must earn grade of C or better in all courses in Speech Pathology and Audiology taken prior to enrollment. Su-

pervised clinical experience in diagnostics and rehabilitation techniques for children and adults with hearing loss. May be repeated to maximum of 6 units.

430 Paracommunication Processes in Rehabilitation of Pre-Lingually Hearing Impaired (3)

Methods of manual communication and relationships to other forms of communication; use of non-oral communication in therapeutic and educational settings.

431 Laboratory: Paracommunication Processes (1)

Intensive practice in use of paracommunication processes in habilitation of pre-lingually hearing impaired.

435 Cued Speech (1)

Prerequisite: Speech Pathology 434 or Audiology 400AB and 402. Theory and practicum in use of cued speech to supplement oral communication with hearing impaired. May be of primary interest to speech therapists. Credit cannot be earned for both Audiology 430 and 435.

436 Laboratory: Cued Speech (1)

Prerequisite: Concurrent enrollment in Audiology 435. Intensive practice of receptive and expressive skills in use of cued speech.

440 Clinical Practice in Pure Tone Threshold and Screening Audiometry (1)

Prerequisites: Audiology 401; concurrent enrollment in 402. Supervised clinical experience in public schools in hearing conservation screening program and in threshold audiometry with hearing-impaired children and adults.

441 Clinical Practice in Hearing Evaluation (1)

Prerequisites: Audiology 403, 420, and 440, and Speech Pathology 461, or equivalents. Supervised clinical experience in diagnostic hearing evaluation and hearing aid selection. May be repeated to maximum of 6 units.

444 Clinical Practice in Auditory Processing and Listening Skills (1)

Prerequisite: Audiology 404. Clinical practice in detection of central problems in auditory processing; development of listening skills in children with peripheral or central problems in hearing.

Engineering

The School of Engineering offers programs leading to the Bachelor of Science degree either without a specific option or with options in Civil, Electrical, or Mechanical Engineering. The program leading to the Bachelor of Science degree without option is administered by the Department of Interdisciplinary Engineering; other undergraduate programs and the graduate programs are administered by the respective departments.

The School offers programs leading to Master of Science degrees in Civil Engineering, Electrical Engineering, and Mechanical Engineering. These are described in the *Graduate Programs* section.

The Faculty

Department of Civil Engineering

Professors: Frank R. Balle, Anjan K. Bhaumik (Chairperson), Young C. Kim, King S. Luk, William G. Plumtree.

Associate Professors: Raymond I. Jeng, Irving Kett, Paul Rogers, Gunjit S. Sikand, Wen L. Wang.

Assistant Professor: Louis A. Volse.

Department of Electrical Engineering

Professors: George B. Bouse, Roger D. Brandt (Chairperson), Leslie Cromwell, Louis W. Eggers, Jr., Vincent A. Giroux, M. Morris Mano, Victor Payse, Jr., Harold Storch.

Associate Professors: Martin S. Roden, Sidney Soclof, Joshua S. L. Wong.

Assistant Professor: Jack G. Levine.

Department of Mechanical Engineering

Professors: Phillip I. Gold (Chairperson), Charles Haberman, George E. Mann, Dan R. Rankin.

Associate Professors: Bernard Epstein, Alfred H. Fritz, Ramachandra Manvi, Michael J. Maurer.

Assistant Professor: Richard D. Roberto.

Department of Interdisciplinary Engineering

Professor Alfred H. Fritz (Acting Chairperson) and all faculty from other Engineering departments serve this department.

The Undergraduate Program

The Bachelor of Science degree program provides instruction in the basic sciences, and engineering design and synthesis. The degree may be earned with an option in Civil, Electrical, or Mechanical Engineering, or with a Special Option. The program leading to the Bachelor of Science degree in Engineering without option is accredited by the Engineers' Council for Professional Development. Students may prepare for both traditional and innovative careers in engineering fields, and in interdisciplinary combinations, such as biomedical engineering, materials sciences, and engineering geology.

Transfer Students

The Engineering program is designed for students who transfer from a California community college as well as those who begin their work at Cal State L.A.

Students considering transfer are urged to consult either the School's principal adviser or department adviser for complete details and for program counseling, to insure the most effective academic and career preparation.

In evaluating transfer courses, the School of Engineering does not give subject credit for upper division work taken at another institution in which the grade of "D" or its equivalent was

earned. Lower division courses are not subject to this restriction.

Bachelor of Science Degree in Engineering

A total of 198 quarter units is required for the Bachelor of Science degree. All students take a required basic program of lower and upper division courses, which is followed by the specific requirements and technical electives appropriate to the option selected and the professional objectives of the individual student. Fifty-two units of the total are in General Education courses.

Students consult with a faculty adviser before registering for classes in their initial quarter. They are urged to develop working relationships with their advisers, and are expected to design elective programs in consultation with them.

Requirements for the Major

The 146 units required for the major consists of a basic program of 86 units required of every student plus an option and technical electives totaling 60 units, most of which are upper division.

Engineering students may not register for elective courses until all required lower division course work has been completed.

The Basic Program

The 86 units of required courses in Engineering, Mathematics and the Sciences are as follows:

Lower Division

Required in Engineering (23 units):

- 103 Design Graphics (3)
- 201 Statics (4)
- 204 Circuit Analysis (4)
- 205 Strength of Materials I (4)
- 207 Materials of Engineering (4)
- 209 Engineering Analysis I (4)

Required in Related Fields (44 units):

In Mathematics:

- 206-09 Calculus I-IV (4-4-4-4)

Students must pass Mathematics Placement Examination or take Mathematics 102 and 103 as prerequisite.

- 290 Digital Computer Programming (2)

In Physics:

- 201-04 General Physics I-IV (4-4-4-4)

In Chemistry:

- 101-02 General Chemistry I, II (5-5)

Elective (0-4 units):

Select a course in science, engineering or mathematics, with approval of adviser.

Upper Division

Required in Engineering (3 units):

- 310 Engineering Measurements Laboratory (1)
- 311 Electric Circuits Laboratory (1)
- 312 Strength of Materials Laboratory (1)

Required in Related Fields (12 units):

In Economics:

- 300 Economics for Engineers (4)

In English:

- 306 Technical Report Writing (4)

In Mathematics:

- 302 Differential Equations for Engineers and Physicists (4)

Elective (0-4 units):

Select a course in science, engineering or mathematics, with approval of adviser.

Departmental Options and Elective Courses

All Engineering students complete an option of 60 units of required and elective courses, selected according to individual interests with the consent of a departmental adviser.

Civil Engineering Option

Required in Engineering (40 units):

Lower Division

- 202 Plane Surveying (4)

Upper Division

- 303 Fluid Mechanics I (4)
- 320 Dynamics I (4)
- 360 Structural Mechanics I (4)
- 361 Structural Design I (4)
- 366 Soil Mechanics I (4)
- 370 Transportation Engineering (4)
- 387 Hydraulics I (4)

Select *one* course from each of following pairs:

- 304 Electric Machines (4)

or

- 335A Electronics I (4)

- 306 Heat Transfer (4)

or

- 326A Thermodynamics I (4)

Electives (20 units):

Select a coherent program of 16 units from Civil Engineering electives, which may include a maximum of 4 units from related fields with approval of the Civil Engineering Department, plus 4 units of Civil Engineering laboratory courses.

Lecture Courses:

- 356 Specification and Cost Estimating (4)
- 402 Strength of Materials II (4)
- 408 Fluid Mechanics II (4)
- 460 Structural Mechanics II (4)
- 461 Design of Steel Structures (4)
- 462 Reinforced Concrete Design I (4)
- 467 Foundations I (4)
- 471 Highway Engineering I (4)
- 472 Highway and Airport Pavement Design (4)
- 474 Traffic Engineering (4)
- 475 Advanced Surveying (4)
- 483 Hydrology I (4)
- 484 Sewerage and Sewage Treatment (4)
- 485 Water Supply (4)
- 490 Engineering Applications of Digital Computers (4)

Laboratory Courses:

- 313 Fluid Mechanics Laboratory (1)
- 364 Concrete Laboratory (1)
- 368 Soil Mechanics Laboratory (1)
- 372 Asphaltic Materials Laboratory (1)
- 412 Strength of Materials Laboratory II (1)
- 473 Pavement Design Laboratory (1)
- 499 Undergraduate Directed Study (1 unit
maximum applicable toward laboratory credit)

Electrical Engineering Option

Required Courses (29 units):

Lower Division

In Physics:

- 205 General Physics (4)

Upper Division

In Engineering:

- 304 Electric Machines (4)
- 306 Heat Transfer (4)
- 317 Electronics Laboratory I (1)
- 326A Thermodynamics I (4)
- 332 Systems Analysis (4)
- 335A Electronics I (4)
- 344 Digital Engineering (4)

Electives (31 units):

Area of Specilization (8 units)

Select one of following pairs of courses:

CIRCUITS:

- 333 Circuit Analysis II (4)
- 430 Circuit Analysis III (4)

COMMUNICATIONS:

- 431AB Electric Communications I, II (4-4)

COMPUTER ENGINEERING:

- 447 Computer Organization (4)
- 449 Logic Design (4)

CONTROLS:

- 438AB Control Systems Theory I, II (4-4)

ELECTRIC AND MAGNETIC FIELDS:

- 437 Electric and Magnetic Fields (4)
- 445 Communications Electromagnetics (4)

ELECTRONICS:

- 335B Electronics II (4)
- 435 Electronic Design with Integrated Circuits (4)

or

- 439 Digital and Timing Circuits (4)

POWER:

- 432 Power Transmission Lines (4)
- 433 Electric Power System Analysis (4)

Electives in Electrical Engineering (12 units):

Select three from following courses, other than those taken for area of specialization:

- 333 Circuit Analysis II (4)
- 335B Electronics II (4)
- 430 Circuit Analysis III (4)
- 431AB Electric Communications I, II (4-4)
- 432 Power Transmission Lines (4)
- 433 Electric Power System Analysis (4)
- 434 Electromagnetic Energy Conversion (4)
- 435 Electronic Design with Integrated Circuits (4)
- 437 Electric and Magnetic Fields (4)
- 438AB Control Systems Theory I, II (4-4)
- 439 Digital and Timing Circuits (4)

- 445 Communications Electromagnetics (4)
- 447 Computer Organization (4)
- 449 Logic Design (4)
- 490 Engineering Application of Digital Computers (4)
- 494 Biomedical Instrumentation (4)

Additional Electives (8 units):

Select 8 units from appropriate courses in engineering, mathematics, sciences, or other fields, with approval of adviser and department chairperson.

Laboratory Courses (3 units):

Select three from following:

- 314 Electromagnetic Energy Conversion Laboratory (1)
- 340 Electronics Laboratory II (1)
- 441 Communications Laboratory (1)
- 442 Control Systems Laboratory (1)
- 443 Digital and Timing Circuits Laboratory (1)
- 446 Digital Logic Laboratory (1)
- 448 Computer Laboratory (1)
- 499 Undergraduate Directed Study (Maximum of 1 unit applicable toward laboratory credit)

Mechanical Engineering Option

Required in Engineering (32 units):

- 303 Fluid Mechanics I (4)
- 304 Electric Machines (4)

or

- 335A Electronics I (4)
- 306 Heat Transfer (4)
- 320 Dynamics I (4)
- 323 Machine Design I (4)
- 326AB Thermodynamics I, II (4-4)
- 499 Undergraduate Directed Study (1-4)

Electives (28 units):

Select courses to include at least 24 units from upper division listed below, including four laboratory courses in Mechanical Engineering. Interdisciplinary Engineering courses may be included with departmental approval.

Lecture Courses:

- 309 Engineering Analysis II (4)
- 321 Kinematics of Mechanisms (4)
- 328 Introduction to Metallurgy (4)
- 401 Advanced Dynamics (4)
- 402 Strength of Materials II (4)
- 403 Aerodynamics (4)
- 404 Principles of Turbomachinery (4)
- 407 Introduction to Statistical Thermodynamics (4)
- 408 Fluid Mechanics II (4)
- 411 Vibrational Analysis I (4)
- 414 Machine Design II (4)
- 415 Air Conditioning (4)
- 416 Refrigeration (4)
- 420 Power Plants (4)
- 422 Optimization of Mechanical Engineering Systems (4)
- 425 Process Heat Transfer (4)
- 426 Thermodynamics III (4)
- 428 Mechanical Metallurgy (4)
- 438A Control Systems Theory I (4)
- 490 Engineering Application of Digital Computers (4)
- 493 Introduction to Biomedical Engineering (4)
- 495 Introduction to Nuclear Engineering (4)

Laboratory Courses:

- 313 Fluid Mechanics Laboratory (1)
- 315 Thermal Systems Lab (1-1)
- 329 Metallography Laboratory (1)
- 412 Strength of Materials Laboratory II (1)
- 413 Aerodynamics Laboratory (1)
- 417 Machine Analysis Laboratory (1)
- 442 Control Systems Laboratory (1)
- 499 Undergraduate Directed Study (1)

Special Option

Required in Engineering (16 units)

Select from following:

- 303 Fluid Mechanics I (4)
- 304 Electric Machines (4)
- 306 Heat Transfer (4)
- 320 Dynamics I (4)
- 326A Thermodynamics I (4)
- 335A Electronics I (4)

Electives (44 units):

With prior approval of permanent adviser and department chairperson, the student elects a grouping of courses and laboratories with a specific objective. These may be chosen from the Interdisciplinary Lectures and Laboratories and from an appropriate combination of approved courses in engineering, mathematics, science, and business and economics.

Lecture and Laboratory Courses:

- 402 Strength of Materials II (4)
- 408 Fluid Mechanics II (4)
- 412 Strength of Materials Laboratory II (1)
- 438A Control Systems Theory I (4)
- 442 Control Systems Laboratory (1)
- 490 Engineering Applications of Digital Computers (4)
- 493 Introduction to Biomedical Engineering (4)
- 494 Biomedical Instrumentation (4)

Courses of Instruction**Lower Division Courses****103 Design Graphics (3)**

Prerequisite: One year high school mechanical drawing or equivalent or Industrial Studies 110. Role of engineer, work of engineer, design process; problem identification, analysis of design data, pictorial presentation, design problems; spatial relationships, empirical equations, nomography. Lecture 2 hours, laboratory 3 hours.

201 Statics (4)

Prerequisites: Physics 201 and Mathematics 207. Fundamental principles of statics, resolution and composition of forces, algebraic and graphic solutions, friction, center of gravity, moment of inertia.

202 Plane Surveying (4)

Prerequisite: Mathematics 103 or satisfactory score on math placement test. Principles and practices of measurement of distances, directions and elevations; care and use of level, transit, plane table; mapping practice, and symbols. Lecture 2 hours, laboratory 6 hours.

204 Circuit Analysis (4)

Prerequisites: Physics 203 and Mathematics 208. Electric circuit analysis, transient and steady state solutions; balanced three-phase circuits; introduction to frequency response; instrumentation.

205 Strength of Materials I (4)

Prerequisite: Engineering 201. Stresses and strains under axial, shearing and torsional forces; flexural stresses and deflections of simple beams; columns and combined stresses.

207 Materials of Engineering (4)

Prerequisites: Mathematics 206, Chemistry 101 and Physics 201. Introduction to the basic structure of engineering materials; relation of properties of materials to the structure.

209 Engineering Analysis I (4)

Prerequisites: Mathematics 208 and Physics 201. Introduction to calculations using vectors, matrices and probability and statistics; applications of these methods to simple engineering problems.

250 Impact of Technology on Society (4)

Role of technology as both solver and creator of technical and social problems. Social implications of technological progress. Intended for all majors.

Upper Division Courses**303 Fluid Mechanics I (4)**

Prerequisite: Engineering 201. Fundamental principles and methods of fluid mechanics; thermodynamics of fluid flow; Newtonian fluids; equations of fluid flow; laminar and turbulent flow; applications.

304 Electric Machines (4)

Prerequisites: Engineering 204 and Mathematics 302. Electromechanical principles and applications to electric machines; introduction to electronic devices; amplifiers.

306 Heat Transfer (4)

Prerequisites: Engineering 303 and Mathematics 302. Fundamental principles of heat transfer; conduction, convection, and radiation; applications.

309 Engineering Analysis II (4)

Prerequisites: Engineering 204, 205, 320, and Mathematics 302. Setup of electrical, vibration, heat flow, fluid flow, and structural systems as ordinary and partial differential equations; analogies that exist between various physical systems; classical transform and numerical methods of solution.

310 Engineering Measurements Laboratory (1)

Prerequisite: Physics 203. Techniques and procedures used in making typical measurements in engineering laboratories. Laboratory 3 hours.

311 Electric Circuits Laboratory (1)

Prerequisites: Engineering 204 and 310; 204 may be taken concurrently. Experimental verification of the laws of electric circuits. Laboratory 3 hours.

312 Strength of Materials Laboratory I (1)

Prerequisites: Engineering 103, 205 and 310; 205 may be taken concurrently. Tests of engineering materials in tension, compression, bending and torsion; verification by experiment, basic theories learned in strength of materials. Laboratory 3 hours.

313 Fluid Mechanics Laboratory (1)

Prerequisites: Engineering 103 and 303. Flow through orifices, nozzles, meters, and pipes and over weirs; water hammer; friction; pumps and turbines. Laboratory 3 hours.

314 Electromagnetic Energy Conversion Laboratory (1)

Prerequisites: Engineering 304 and 311. Laboratory investigations of electromechanical machines. Laboratory 3 hours.

315 Thermal Systems Laboratory (1)

Prerequisites: Engineering 306 and 310 (306 may be taken concurrently). Experiments and projects in heat transfer and thermodynamics; thermophysical properties of fluids; analysis, operation and performance testing of thermal energy conversion systems. Laboratory 3 hours. May be repeated to maximum of 2 units.

317 Electronics Laboratory I (1)

Prerequisites: Engineering 311 and 335A (335A may be taken concurrently). Laboratory study of transistor and vacuum tube devices and single stage amplifier circuits. Laboratory 3 hours.

320 Dynamics I (4)

Prerequisite: Engineering 201. Kinematics and kinetics of rigid bodies; work, kinetic energy, impulse, momentum in two and three dimensions; applications to space mechanics.

321 Kinematics of Mechanisms (4)

Prerequisites: Engineering 205 and 320. Transmission of motion; theory of mechanisms; linkages; gears; cams; belts, and chains.

323 Machine Design I (4)

Prerequisites: Engineering 205 and 320. Application of principles of mechanics, properties of materials, and fabrication processes to design of simple machines and structural elements.

326A Thermodynamics I (4)

Prerequisites: Physics 202 and Mathematics 208. Concepts of equilibrium and temperature; First and Second Laws of Thermodynamics. Properties of pure substances; ideal gases; application of thermodynamic principles to closed and open systems.

326B Thermodynamics II (4)

Prerequisite: Engineering 326A. Application of thermodynamic principles; steam generators, engines and turbines; combustion, vapor cycles; refrigeration; internal combustion engines.

328 Introduction to Metallurgy (4)

Prerequisites: Engineering 207 and 326A. Theory, composition, and properties of pure metals and alloys. Alloying, fabrication and heat treatment of metals, with emphasis on nature of metals and their alloys.

329 Metallography Laboratory (1)

Prerequisite: Engineering 328 (may be taken concurrently). Preparation of metallic samples and study of their internal structure by microscopic techniques. Laboratory 3 hours.

332 Systems Analysis (4)

Prerequisites: Engineering 204, 209, and Mathematics 290, 302. Linear systems analysis by Fourier and Laplace transform and state space methods; complete system response and system applications.

333 Circuit Analysis II (4)

Prerequisite: Engineering 332. Analysis of electric circuits with use of state variables and Laplace and Fourier transforms; two ports and filters.

335A Electronics I (4)

Prerequisite: Engineering 204. Principles of semiconductor devices. Analysis of linear and non-linear electronic circuits.

335B Electronics II (4)

Prerequisite: Engineering 335A. Analysis of multistage electronic amplifier circuits; time and frequency domain response of amplifier circuits; effects of feedback on amplifiers.

340 Electronics Laboratory II (1)

Prerequisites: Engineering 317 and 335B (335B may be taken concurrently). Laboratory study of electronic amplifier circuits. Laboratory 3 hours.

344 Digital Engineering (4)

Prerequisite: Engineering 204. Binary systems; Boolean functions and their simplification; introduction to analysis and design of digital systems.

351N Introductory Medical Physics and Instrumentation (4)

(Also listed as Physics 351)

Prerequisite: Chemistry 151. Elementary electricity, heat, sound, wave motion, as applied to examples in human physiological phenomena and in biomedical instruments. Physical principles and operation of transducers, amplifiers, recorders, and selected biomedical instruments. Lecture 3 hours, laboratory 3 hours.

352 Technological Aspects of Urban Environment (4)

Prerequisite: Junior standing or consent of instructor. Current engineering practice in dealing with urban problems such as public health, pollution, transportation, communications, public utilities, land planning and use. Intended for all majors. Not acceptable for engineering technical elective credit.

360 Structural Mechanics I (4)

Prerequisite: Engineering 205. Analysis of determinate structures: beams, frames, and cables. Introduction to influence lines and analysis of indeterminate structures.

361 Structural Design I (4)

Prerequisite: Engineering 360. Basic concepts of design of structures, allowable stresses, codes and design loads. Design of simple determinate members in steel, concrete and timber.

364 Concrete Laboratory (1)

Prerequisites: Engineering 312 and 361 (both may be taken concurrently). Physical tests of cement, concrete aggregates, tensile strength test of cement, proportioning of concrete mixtures, slump test, compressive and flexural strength tests. Laboratory 3 hours.

365 Specifications and Cost Estimating (4)

Prerequisite: Senior standing in Engineering. Building specifications and codes, estimating costs, materials handling and transport, excavation, concrete, wood, masonry, and steel construction.

366 Soil Mechanics I (4)

Prerequisites: Engineering 205 and 303 (303 may be taken concurrently). Physical and mechanical properties of soils, classifications, permeability, seepage, capillarity, consolidation, settlement, stresses, pressures, strength theories, testing methods.

368 Soil Mechanics Laboratory (1)

Prerequisites: Engineering 312 and 366 (both may be taken concurrently). Physical properties of soils, soil classification, mechanical analysis, permeability, shearing strength and consolidation tests. Laboratory 3 hours.

370 Transportation Engineering (4)

Prerequisite: Engineering 202. Basic principles for analysis of rural and urban transportation needs; theory of design and operation of various systems.

372 Asphaltic Materials Laboratory (1)

Prerequisite: Engineering 312. Laboratory tests on asphalt cement and aggregates; design of asphaltic mixtures; proportioning of asphalt cement and aggregates; preparation of test specimens. Laboratory 3 hours.

387 Hydraulics I (4)

Prerequisite: Engineering 303. Multiple pipe and reservoir systems; fundamentals of open channel hydraulics, uniform and gradually varied flow; pumps and turbines. Analysis of dams, spillways, and outlet structures.

398 Cooperative Education (1)

Prerequisites: Sophomore standing in Engineering major, overall g.p.a. of 2.35, and approval of departmental adviser prior to registration. Participation in an off-campus program with an approved employer; integration of work experience with academic program through regular meetings scheduled to discuss student's progress. May be repeated to maximum of 6 units. Graded CR/NC only.

401 Advanced Dynamics (4)

Prerequisites: Engineering 309 and 320. Applications of Newtonian, work-energy, and impulse-momentum techniques to advanced problems; Lagrange equations, Hamilton's principle. Castigliano's theorem. Euler's equations, gyro dynamics, and space mechanics.

402 Strength of Materials II (4)

Prerequisites: Engineering 205 and Mathematics 302. Stress-strain relationship in three dimensions; energy principles, theories of failures, curved beams, thick wall cylinders, shear center, unsymmetrical bending and torsion in noncircular sections.

403 Aerodynamics (4)

Prerequisites: Engineering 303 and Mathematics 302. Airfoil characteristics; transonic, supersonic, and viscous effects on lift and drag; power considerations, airplane performances, introduction to airplane and missile stability and control.

404 Principles of Turbomachinery (4)

Prerequisite: Engineering 326B. General treatment of all forms of turbomachines; energy transfer, thermodynamics of compressible flow and flow of fluids in passages and over blades of turbomachines; application to pumps, compressors, hydraulic, gas and steam turbines.

407 Introduction to Statistical Thermodynamics (4)

Prerequisite: Engineering 326B. Review of mathematical probability, fundamentals of statistical mechanics. Partition functions and their relation to thermodynamic properties of matter. Behavior of real gases, liquids and solids. Special topics.

408 Fluid Mechanics II (4)

Prerequisites: Engineering 303 and Mathematics 302. Compressible and incompressible fluid dynamics; continuity, momentum, and energy equations for viscous fluids; circulation and vorticity, Navier-Stokes equation, boundary layer theory, turbulence, two-dimensional flow, three-dimensional flow.

411 Vibrational Analysis I (4)

Prerequisite: Engineering 309. Analysis of free and forced vibrations with and without damping, systems with several degrees of freedom, vibration isolation, mechanical transients, torsional vibrations, natural frequency computation techniques, digital and analog computer applications.

412 Strength of Materials Laboratory II (1)

Prerequisites: Engineering 312 and either 323 or 360 (323 or 360 may be taken concurrently). Fatigue tests of materials and connections, stress concentration, photoelasticity, creep tests, shock and vibration tests, combined stresses and individual projects. Laboratory 3 hours.

413 Aerodynamics Laboratory (1)

Prerequisites: Engineering 313 and 403 (403 may be taken concurrently). Introduction to subsonic and supersonic wind tunnel testing, laboratory investigations of characteristics of airfoils and various aerodynamic bodies. Laboratory 3 hours.

414 Machine Design II (4)

Prerequisites: Engineering 321 and 323. Design of unit assemblies and machines; materials, safety, lubrication, construction.

415 Air Conditioning (4)

Prerequisite: Engineering 326B. Psychometric properties of air, heat loads, air conditioning and heating equipment, air distribution.

416 Refrigeration (4)

Prerequisite: Engineering 326B. Refrigeration equipment and cycles, common refrigeration problems.

417 Machine Analysis Laboratory (1)

Prerequisites: Engineering 310, 321, and 323. Experimental analysis of steady state and transient characteristics of machine components and of complete machines. Laboratory 3 hours.

420 Power Plants (4)

Prerequisite: Engineering 326B. Survey of power generating systems, theoretical analysis of power cycles; preliminary design calculations for sizing power station equipment.

422 Optimization of Mechanical Engineering Systems (4)

Prerequisites: Engineering 306, 323 and 326B. Design considerations of mechanical engineering systems; optimization techniques; application of existing computer programs and analytical methods to optimization of mechanical engineering systems.

425 Process Heat Transfer (4)

Prerequisite: Engineering 306. Computer design of single-phase heat exchangers including surface area, pressure drop and flow arrangement. Prediction of process conditions for heat transfer systems including pipe flow and pumping specifications.

426 Thermodynamics III (4)

Prerequisite: Engineering 326B. Application of thermodynamic principles. Thermodynamic relations, real gases and mixtures, applications of Corresponding States principle, concepts of stability and equilibrium, homogeneous and heterogeneous equilibria, Third Law.

428 Mechanical Metallurgy (4)

Prerequisite: Engineering 328. Plasticity, deformation of single crystals and polycrystalline aggregates, dislocations, fracture, internal friction, brittle failure, residual stresses, plastic forming. Application to material testing and plastic forming of metals.

430 Circuit Analysis III (4)

Prerequisite: Engineering 333. Advanced circuit analysis using network functions, two port parameters, block diagrams, signal flow graphs; synthesis of one port network and design problems.

431A Electric Communications I (4)

Prerequisite: Engineering 332. Bandwidth requirements of audio, video and pulse signals; carrier communications systems; types of modulation; communication circuits; transmitters and receivers.

431B Electric Communications II (4)

Prerequisite: Engineering 431A. Probability functions, random variables, and random signals encountered in communication; information measure and channel capacity of systems with noise.

432 Power Transmission Lines (4)

Prerequisite: Engineering 304. Function and structure of power systems, transmission lines, generalized circuit constants, circle diagrams.

433 Electric Power System Analysis (4)

Prerequisite: Engineering 432. Representation of power systems, symmetrical components, short circuits on machines and systems, system protection, elements of system stability.

434 Electromagnetic Energy Conversion (4)

Prerequisite: Engineering 304. Analysis of realistic machine performance; steady state and dynamic response of d-c, synchronous and induction machines; fractional horsepower a-c motors.

435 Electronic Design with Integrated Circuits (4)

Prerequisite: Engineering 335B. Applications of monolithic and hybrid linear integrated circuit functional modules and their characteristics. Design of electronic subsystems and systems using linear integrated circuits. Characteristics and applications of operational amplifiers, video amplifiers, RF/IF amplifiers, modulators and demodulators.

437 Electric and Magnetic Fields (4)

Prerequisite: Engineering 304. Static field theory and applications; Maxwell's equations and applications; electromagnetic waves; introduction to transmission lines.

438A Control Systems Theory I (4)

Prerequisites: Engineering 304 and 309 or 332. Analysis and design of feedback control systems by classical methods; introduction to state-variable methods.

438B Control Systems Theory II (4)

Prerequisite: Engineering 438A. Design of multiple-loop, multiple-signal control systems; non-linear control systems; computers and optimization.

439 Digital and Timing Circuits (4)

Prerequisites: Engineering 335A and 344. Piecewise linear analysis of electronic circuits; theory and application of wave shaping, timing, digital, and pulse circuits.

441 Communications Laboratory (1)

Prerequisites: Engineering 317 and 431A (431A may be taken concurrently). Laboratory investigations of characteristics of communication systems and components.

442 Control Systems Laboratory (1)

Prerequisite: Engineering 438A (may be taken concurrently). Analysis and design of fundamental control systems by model and full-scale construction in laboratory, and by employing root-locus, frequency response, analog simulation and other standard techniques. Laboratory 3 hours.

443 Digital and Timing Circuits Laboratory (1)

Prerequisites: Engineering 317 and 439 (439 may be taken concurrently). Laboratory experiments in design of digital, timing and pulse forming electronic circuits. Laboratory 3 hours.

445 Communications Electromagnetics (4)

Prerequisite: Engineering 437. Transmission line theory; traveling waves on dissipative lines, plane waves; TE and TM waves; waveguides; introduction to radiation.

446 Digital Logic Laboratory (1)

Prerequisites: Engineering 317 and 344 (344 may be taken concurrently). Laboratory experiments in the logic design of digital systems. Laboratory 3 hours.

447 Computer Organization (4)

Prerequisite: Engineering 344. Stored-program concept, central processor organization, classes of machine instructions, addressing techniques, data types, memory organization, input-output and back-up storage, machine and symbolic language programming.

448 Computer Laboratory (1)

Prerequisite: Engineering 447 (may be taken concurrently). Hardware design of digital computer functions with MSI and LSI integrated circuits. Machine and symbolic language programming with a minicomputer. Laboratory 3 hours.

449 Logic Design (4)

Prerequisite: Engineering 344. Design and simplification of combinational circuits. Analysis and synthesis of asynchronous and synchronous sequential circuits. Application to digital systems design.

460 Structural Mechanics II (4)

Prerequisite: Engineering 360. Analysis of indeterminate structures; moment distribution, slope deflection and approximation methods; three dimensional frames and long span structures.

461 Design of Steel Structures (4)

Prerequisites: Engineering 361 and 460 (460 may be taken concurrently). Design of steel structures; lateral buckling of beams and frames, built-up beams, girders and trusses; moment connections, torsion and unsymmetrical bending; diaphragms and lateral force designs.

462 Reinforced Concrete Design I (4)

Prerequisites: Engineering 361 and 460 (460 may be taken concurrently). Design of concrete structures, ultimate theory and working stress design; continuous slabs and beams, rigid frames; columns, footings and retaining structures.

463 Structural Design Project (1)

Prerequisite: Engineering 461 or 462. Design calculations and engineering drawings for a complete structural system; individual projects involving steel, concrete, and other engineering materials. Laboratory 3 hours.

467 Foundations I (4)

Prerequisite: Engineering 366. Site exploration, bearing capacity, slope stability, lateral earth pressure, types of foundations, footings, caissons, piles, retaining walls, cofferdams.

471 Highway Engineering I (4)

Prerequisites: Engineering 202 and 370. Introduction to principles of highway design including route location, geometrics of horizontal and vertical curves, earthwork computations, drainage design; computer applications.

472 Highway and Airport Pavement Design (4)

Prerequisites: Engineering 361 and 366. Theory and principles of pavement design for highways and airports; effects of soil characteristics and physical properties of basic materials; testing procedures.

473 Pavement Design Laboratory (1)

Prerequisites: Engineering 312 and 472 (472 may be taken concurrently). Basic tests performed in evaluation of treated and untreated bases, subbases, and subgrades necessary for pavement thickness design. Laboratory 3 hours.

474 Traffic Engineering (4)

Prerequisite: Engineering 370. Elements of traffic engineering; vehicle, driver and road characteristics; capacity and flow determination; signalized intersections.

475 Advanced Surveying (4)

Prerequisite: Engineering 202. Advanced surveying including triangulation, field astronomy, photogrammetry, and land surveying.

483 Hydrology I (4)

Prerequisite: Engineering 303. Precipitation, evaporation, infiltration, transpiration, and runoff; methods of predicting discharge from precipitation, flood routing, and measurement of hydrologic processes.

484 Sewerage and Sewage Treatment (4)

Prerequisite: Engineering 303. Sanitary and storm sewer systems, sewage treatment and disposal, stream sanitation, and treatment plant design.

485 Water Supply (4)

Prerequisite: Engineering 303. Sources and collection of surface and ground water, distribution systems, water quality, water treatment plants, sedimentation, filtration, softening, and disinfection.

490 Engineering Application of Digital Computers (4)

Prerequisites: Mathematics 290 and 302. Use of Fortran programming and numerical solution techniques to solve engineering problems of various selected types.

493 Introduction to Biomedical Engineering (4)

Prerequisites: Engineering 335A and a biology course meeting General Education requirement in biological sciences. Engineering analysis of the human body, concepts of electrophysiology; measurement of physiological parameters, medical electronics; engineering techniques in medical research and hospitals; human beings in their environment.

494 Biomedical Instrumentation (4)

Prerequisite: Engineering 335A and a biology course meeting General Education requirement in biological sciences. Elements of biomedical instrumentation; bioelectric potentials, electrodes, and transducers; measure-

ments in cardiovascular, respiratory and nervous systems; patient care, monitoring and safety; clinical laboratory; computer in medical measurements.

495 Introduction to Nuclear Engineering (4)

Prerequisite: Senior standing in Engineering or in a physical science. Basic engineering principles in design of nuclear reactors; survey of nuclear phenomena, including diffusion of neutrons; reactor mechanics, radiation shielding, construction materials, reactor instrumentation and control.

496 Civil Engineering Seminar (1)

Prerequisite: At least 20 units in Civil Engineering core courses. Recent developments and advanced topics in field of civil engineering.

498 Special Topics in Engineering (1-4)

Prerequisite: Senior standing in Engineering; enrollment subject to approval of instructor in charge. Group study of selected topics not currently offered as technical electives; study groups may be organized in advanced engineering subjects upon approval of instructor.

499 Undergraduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Project selected in conference with the sponsor before registration; progress meetings held regularly, and a final report submitted. May be repeated for credit.

English

In School of Letters and Science

The Department of English offers both Bachelor of Arts and Master of Arts degrees in English, as well as programs leading to teaching credentials. As described below, the undergraduate program explores literature of every genre, and writing in all forms. The Master of Arts degree program is described in the *Graduate Programs* section.

The Faculty

Professors: Edward Abood, Daniel A. Amneus, Charles E. Beckwith, Donald A. Bird, John C. Bushman, Henri Coulette, Morton J. Cronin, Saralyn R. Daly, Otto W. Fick, Norman Fruman, Byron Guyer, Robert S. Hodgman, David Laird, H. Landar, William G. Leary, Richard G. Lillard, Jean Maloney, Fred H. Marcus, John A. Palmer, John W. Rathbun, Sidney Richman (Chairperson), Clarence K. Sandelin, Gaby Stuart, Irwin Swerdlow, Wirt A. Williams, Jr., Paul M. Zall.

Associate Professors: Sharon Bassett, Harry Brand, David Carroll, Katherine Carter, Philip Friedman, David L. Kubal, Dorothy C. McKenzie, James T. Sullivan, Eleanor Tweedie.

Assistant Professors: Peter A. Brier, John L. Cleman, Marie Ohlsen, Elaine Osio, Thomas H. Peterson, Vilma L. Potter, Carl M. Selkin, John H. Weston.

The Undergraduate Program

Students electing to major in English for their Bachelor of Arts degree must request advisement in the Department of English upon beginning course work in their major.

Those majoring in English are urged to acquire command of at least one foreign language as part of their college program of study.

Requirements for the Major

Required for the major are 64 units of English, of which 8 are in lower division courses.

Lower Division

Required in English (8 units):

Select *two* from following:

- 221 Interpreting Fiction (4)
- 222 Interpreting Dramatic Literature (4)
- 223 Interpreting Poetry (4)

Upper Division

Required in English (12 units):

- 340 Writing the Critical Essay (4)
- 401 English Language in America (4)
- 417 Shakespeare I (4)

Electives in English, American, and World Literature (24 units):

Select *three* from following:

- 416 Chaucer (4)
- 419 Milton (4)
- 460 Medieval English Literature (4)
- 461 Renaissance Drama (4)
- 463 Renaissance Non-Dramatic Literature (4)
- 464 Seventeenth Century Literature (4)
- 465 The Augustan Age (4)
- 467 The Romantic Age (4)
- 468 The Victorian Age (4)

Select *two* from following:

- 471 American Authors: Edwards to Emerson (4)
- 472 American Authors: Melville to Whitman (4)
- 473 American Authors: Dickinson to James (4)

Select *one* from following:

- 424 Greek and Roman Drama in Translation (4)
- 427 Modern Drama: Continental, English, and American (4)
- 480 Literature and Fine Arts, B.C. (4)
- 481 Literature and Fine Arts, A.D. (4)
- 482 The Bible as Literature: Old and New Testaments (4)
- 484 Major Continental Fiction: Cervantes to Balzac (4)
- 485 Major Continental Fiction: Stendhal to Tolstoy (4)
- 486 Twentieth Century Continental Fiction (4)
- 492 Special Studies in World Writers in Translation (1-4)

Electives in English, Related Fields (20 units):

Select *five* from following:

In English:

Any 300- or 400-level courses.

In American Studies:

- 402 Ideas in America (4)
- 404 Avant-Garde in American Life (4)

In Related Fields:

A maximum of 8 units may be taken in a related field outside English. All selections must be made with approval of adviser.

Minor in English

The minor in English provides a varied and flexible literary program, individually planned, for majors in other fields. Students who plan to write

or edit, or who are interested in business, the professions, or government service, may find this minor significant in their career development.

A total of 24 units is required, of which 8–12 units may be taken in lower division and 300-level course work, and 12–16 units in 400-level courses.

Lower Division

Required in English (8–12 units):

Select at least two from following:

- 221 Interpreting Fiction (4)
- 222 Interpreting Dramatic Literature (4)
- 223 Interpreting Poetry (4)
- 250 Understanding Literature (4)
- 251 Black American Literature (4)

Upper Division

Elective in English (0–4 units):

Students may take the following course if only 8 units are selected in lower division courses:

- 340 Writing the Critical Essay (4)

Required in English (12–16 units):

Select *three or four* courses as needed from following with approval of adviser:

In Language:

English 401, 402, 406

In Literature:

English 416–419, 424, 427, 428, 446, 447, 460–468, 471–475, 478–479, 480–486, 490–493

NOTE: With prior approval by English adviser one of these courses may be replaced by any other course the student may wish to select.

Minor in Creative Writing

The minor in creative writing is designed for students majoring in other fields who are interested in the writing of imaginative literature, which may include such forms as poetry, fiction, and drama. A total of 24 units is required, of which 4–8 units must be in lower division, 4 units in 300-level, and 12–16 units in 400-level courses.

Lower Division

Required in English (4–8 units):

Select from following:

- 221 Interpreting Fiction (4)
- 222 Interpreting Dramatic Literature (4)
- 223 Interpreting Poetry (4)
- 225 Interpreting Film (4)

Upper Division

Required in English (4 units):

Prerequisite to English 307 in the creative writing minor program is at least 4 units from the lower division requirement listed above.

- 307 Creative Writing Workshop (4)

Electives in English and Related Fields (12–16 units):

Select from following with approval of adviser:

In English:

- 406 Advanced Writing (4)
- 408 Creative Writing (Fiction) (4)

May be repeated once for credit in the minor.

- 408 Creative Writing (Poetry) (4)

May be repeated once for credit in the minor.

In Drama:

- 476 Playwriting (4)

In Broadcasting:

- 410 Radio and Television Writing (4)

The Credential Program

The Bachelor of Arts degree in English which is intended for examination waiver for the single subject credential in English is currently under preparation. Students should consult advisers in the department and in the School of Education.

Courses of Instruction

Lower Division Courses

106 Writing for the Non-Native Speaker (4)

Open to students whose primary language is not English. Patterns of English phrase and sentence structure; review of punctuation and spelling rules; aids to vocabulary development. Graded A,B,C./NC only.

150AB Written Communication I, II (4-4)

In both A and B sections a diagnostic examination, given in the first week of classes, will test students' command of English. Those who have registered in a course inappropriate to their level of performance will be transferred to another section.

150A: Closely supervised, guided practice in art of writing coherent sentences and organized paragraphs. Graded A,B,C./NC only.

150B: Prerequisite: English 150A or superior high school achievement in English, or consent of instructor. Intensive study of principles of rhetoric, nature and use of language, methods of collecting and evaluating information, practice in writing of thematically controlled essays.

English 150A or B is prerequisite to all English courses listed below.

221 Interpreting Fiction (4)

Analysis and interpretation of representative short stories and novels. Critical compositions and reports required. Recommended as background for all upper division fiction courses.

222 Interpreting Dramatic Literature (4)

Analysis and interpretation of representative plays from Greeks to present. Critical compositions and reports required. Recommended as background for all upper division drama courses.

223 Interpreting Poetry (4)

Analysis of elements of poetry, such as structure, diction, imagery, sound, and tone; analysis of representative poems. Critical compositions and reports required. Recommended as background for all upper division poetry courses.

225 Interpreting Film (4)

Prerequisite: One General Education literature course. Critical study of film as an art form. Emphasis on short films, including variety of genres, such as animation, documentary, and story films.

250 Understanding Literature (4)

Forms and techniques of fiction and/or drama, and poetry; analysis of representative works of various periods. Critical compositions and reports required. Recommended for students in other fields; not open to English majors and minors.

251 Black American Literature (4)

Survey and critical analysis of literature by Black Americans. Emphasis on writing since 1930.

258 Mythology in Literature (4)

Introduction to literature dramatizing dominant myths in world literature; creation of the world; gods and devils; quests and trials of heroes; taboos; scapegoats; underworlds and heavens; death, resurrection, and ascension.

Upper Division Courses

Upper division standing is prerequisite for enrollment in 400-level courses.

Prerequisite for literature courses: English 250 or two of following: English 221, 222, 223, unless otherwise stated.

306 Technical Report Writing (4)

Fundamentals of report writing for science and engineering; in-class and out-of-class practice in writing reports for industry.

307 Creative Writing Workshop (4)

Introductory techniques of writing poetry, short fiction, and drama.

308 Art of Writing (4)

Study of prose models with frequent practice in writing; elements of description, narration, exposition.

340 Writing the Critical Essay (4)

Intensive, supervised practice in advanced composition; emphasis on critical response to a literary work and its effective statement in essay form.

354 Selected Topics in Literature (4)

Prerequisite: English 150A or 150B. Representative works in literature of various thematic or stylistic types. Specific topics announced each quarter in *Schedule of Classes*. Not open to English majors. May be repeated for credit.

355N Great Books (4)

Masterpieces from various periods and cultures. Intended for students not majoring in English.

392 Statement (1-4)

Prerequisite: Consent of faculty adviser of *Statement*. Techniques of producing a university literary magazine. Graded CR/NC only. May be repeated to maximum of 6 units.

400 Introduction to Linguistics (4)

(Also listed as Anthropology 471)

Descriptive and historical study of language; problems of data collection and techniques of analysis, linguistic structure, language classification, language families of the world, language in its socio-cultural setting.

401 English Language in America (4)

Introduction to linguistic theory; elementary structural analysis of phonology, morphology, and syntax; discussion of levels and functional varieties of usage.

402 History of English Language (4)

Prerequisite: English 401 or equivalent. External history; structural history; history of vocabulary; principles of historical linguistics.

403 Language and Culture (4)

(Also listed as Anthropology 470)

Prerequisite: Anthropology 250 or consent of instructor. Role of language in development of cultural patterns, including relationships between change in language and change in culture. Analysis of language as the matrix of culture.

405 Modern English Grammar (4)

Prerequisite: English 401 or equivalent. Transformational generative analysis of contemporary morphology and syntax; its relationship to alternate grammars of English.

406 Advanced Writing (4)

Intensive study of elements of effective prose: logic, style, and sentence structure. Emphasis on writing and revising. Recommended for students not majoring in English.

408 Creative Writing (4)

Prerequisite: Consent of instructor. Separate sections for poetry and fiction. May be repeated to maximum of 16 units; maximum of 4 units accepted toward English major or minor.

410 Writing in the Schools (4)

Principles and procedures of teaching composition, practice in solving writing problems, analysis of student writing.

416 Chaucer (4)

Troilus and Criseyde, *Canterbury Tales*, and selected minor poems as works of art and as reflections of culture and literary conventions of time.

417 Shakespeare I (4)

Shakespearean drama. Intensive study of five or six plays chosen from following: *Julius Caesar*, *Romeo and Juliet*, *Macbeth*, *Twelfth Night*, *The Merchant of Venice*, *Henry IV—Part One*, *Richard III*, and *Hamlet*; elements of Shakespearean drama.

418 Shakespeare II (4)

Prerequisite: English 417. Intensive study of four or five plays (and poems) not included in 417; range and diversity of Shakespeare's art in his time and ours.

419 Milton (4)

Selected works of John Milton.

424 Greek and Roman Drama in Translation (4)

Plays by Aeschylus, Sophocles, Euripides, Aristophanes, Seneca, Plautus, and Terence; characterization, style, focus, problems of translation.

427 Modern Drama: Continental, English, and American (4)

Representative plays by such dramatists as Ibsen, Strindberg, Chekhov, Shaw, Pirandello, O'Casey, O'Neill; major theatrical movements; naturalism, symbolism, and expressionism.

428 Contemporary Drama: Continental, English, and American (4)

Prerequisite: English 427 recommended. Representative plays by such dramatists as Brecht, Lorca, Beckett, Sartre, Genet, Pinter, Miller, Williams. Modern poetic drama; epic, existential, and absurdist theatre; theatre of cruelty.

430 Children's Literature (4)

Criteria for evaluating literature for children, role of literature in the child's education. Not accepted for credit toward M.A. in English.

432 Literature in the Secondary School (4)

Analysis of contemporary popular literature, with emphasis on works written for readers of junior and senior high school age. Not accepted for credit toward M.A. in English.

441 Major Critics (4)

Major critical approaches to literature; systems of Aristotle, Dryden or Johnson, Wordsworth, Coleridge; a modern critic or a contemporary critical problem.

446 The British Novel: Defoe to Hardy (4)

Representative works by major British novelists, e.g., Defoe, Fielding, Sterne, Dickens, Hardy.

447 The British Novel: Conrad to Present (4)

Representative works by modern British novelists, e.g., Conrad, Joyce, Lawrence, Huxley, Caryl Phillips.

451 Film and Literature (4)

Prerequisites: Upper division or graduate standing; completion of 8 units in humanities area of General Education requirements, and 4 units of literature electives. Critical study of films adapted from literary sources along with analysis of original literature for purpose of contrasting the media. May be repeated once as subject matter changes.

460 Medieval English Literature (4)

Lyric poetry, epic and romantic narratives, and dramatic works, from Anglo-Saxon beginnings through fifteenth century, exclusive of Chaucer. Readings in Middle English and in translation.

461 Dramatic Literature of the English Renaissance (4)

Representative plays by Elizabethan and Jacobean dramatists exclusive of Shakespeare, e.g., Marlowe, Dekker, Webster, Jonson, Beaumont and Fletcher.

463 The English Renaissance (4)

Nondramatic literature from Wyatt to Bacon; British and continental cultural, literary, and philosophical backgrounds.

464 Seventeenth Century Literature (4)

Prose and poetry from Donne to Dryden, excluding Milton; literary, social, and political backgrounds.

465 The Augustan Age (4)

Literature from Swift and Pope through Johnson; social and philosophical backgrounds.

467 The Romantic Age (4)

Prose and poetry from Blake to Keats; cultural and philosophical backgrounds.

468 The Victorian Age (4)

Prose and poetry of major Victorian writers; social and philosophical backgrounds.

471 American Authors: Edwards to Emerson (4)

Emphasis on Edwards, Franklin, Hawthorne, and Emerson.

472 American Authors: Melville to Whitman (4)

Emphasis on Melville, Poe, Thoreau, and Whitman.

473 American Authors: Dickinson to James (4)

Emphasis on Dickinson, Twain, Crane, and James.

475 The American Novel Since 1920 (4)

Representative works by major American novelists, e.g., Dreiser, Fitzgerald, Faulkner, Hemingway, and Bellow.

478 Modern Poetry (4)

Backgrounds of modern poetry; representative works by major British and American poets to 1930's, such as Yeats, Eliot, Pound, Frost, Williams, Stevens, Lawrence.

479 Contemporary Poetry (4)

Representative works by British and American poets from 1930's to present, such as Auden, Roethke, Thomas, Lowell, Plath, Hughes, Berryman, Creeley, Baraka, Merwin.

480 Literature and the Fine Arts, B.C. (4)

Ancient literature (Oriental, Greek, and Roman) in relation to other arts. May be taken independently of English 481 or in any sequence with it.

481 Literature and the Fine Arts, A.D. (4)

Western literature (medieval romance, Dante, Cervantes, Voltaire, Goethe, Balzac) in relation to other arts. May be taken independently of English 480 or in any sequence with it.

482 The Bible as Literature: Old and New Testaments (4)

Types and styles of Biblical literature; geographical, historical, cultural, and archeological backgrounds of both Testaments.

484 Major Continental Fiction: Cervantes to Balzac (4)

Representative works by European authors, e.g., Cervantes, Rousseau, Goethe, Balzac.

485 Major Continental Fiction: Stendhal to Tolstoy (4)

Representative works by European authors, e.g., Stendhal, Flaubert, Chekhov, Dostoyevsky, Tolstoy.

486 Twentieth Century Continental Fiction (4)

Representative works by European authors, e.g., Proust, Mann, Kafka, Sartre, Camus.

490 Special Studies in British Writers (1-4)

Intensive study of one British writer, or of a small group

of writers whose works represent a significant movement or aspect of British literature. Specific subject announced in *Schedule of Classes*.

491 Special Studies in American Writers (1-4)

Intensive study of one American writer, or of a small group of writers whose works represent a significant movement or aspect of American literature. Specific subject announced in *Schedule of Classes*.

492 Special Studies in World Writers in Translation (1-4)

Intensive study of one European or Oriental writer, or of a small group of writers whose works represent a significant movement or aspect of world literature. Specific subject announced in *Schedule of Classes*.

493 Special Studies in Literary Criticism (1-4)

Prerequisite: English 441 (may be taken concurrently). Intensive study of a literary critic, or of a major doctrine, movement, or problem in literary criticism. Specific subject announced in *Schedule of Classes*.

499 Undergraduate Directed Study (1-4)

Prerequisites: Consent of an instructor to act as sponsor. Project selected in conference with sponsor. Maximum of 4 units accepted toward English major or minor. Graded CR/NC only.

Foreign Languages and Literatures

In School of Letters and Science

The Department of Foreign Languages and Literatures offers programs leading to Bachelor of Arts degrees in French, German, Japanese, and Spanish, as well as minors in French, German, Russian, and Spanish to accompany a major in another field. In addition, opportunities are offered for one or several years of study in Arabic, Chinese, Hebrew and Latin. Also offered are Master of Arts degrees in French and Spanish, described in the *Graduate Programs* section.

The Faculty

Professors: Abdallah J. Beddawi (Chairperson), Edwin D. Carter, Jr., Wulf Griessbach, Kazumitsu Kato, Hugh W. Kennedy, Harold E. Lionetti, Leon Schwartz.

Associate Professors: Alfred F. M. Atlee, Matilde Castells, Francisco Caudet-Roca, Joseph Chrzanowski, Jeanine Gaucher-Shultz, Grant MacCurdy, Alfredo O. Morales, Elba R. Torres de Peralta, Marie-Antoinette Zrimc.

Assistant Professors: Alfonso Gonzales, H. Jay Harris, Demetra P. N. Palamari, Francoise M. Pasques, Teresa Chi-Ching Sun, Frank Young.

Proficiency Examinations

Foreign language proficiency examinations are administered by the Department of Foreign Languages and Literatures. Students in undergraduate or graduate programs requiring proficiency in a foreign language must apply to this department at the beginning of the quarter in which any such examination is to be taken.

Limitation on Language Credit

Equivalent courses taken at the college level may not be repeated for credit toward a degree. A student with one year of high school language would normally be expected to enter 100B; a student with two years of high school language would enter 100C; with three years, 200A, and so on. However, it is recognized that special circumstances may make it advisable for some students to start at higher or lower levels. The department will therefore allow students to depart from the equivalency formula specified above after consultation and with the recommendation of a properly designated adviser.

ARABIC

The Department of Foreign Languages and Literatures does not offer a major leading to the Bachelor of Arts degree in Arabic, or a minor to accompany a major in another field. However, the courses offered can be of value to students interested in the history of the Middle East, in political science, or in employment with the government, international business firms, or international agencies.

Courses of Instruction—Arabic

100ABC Elementary Arabic (4-4-4)

Must be taken in sequence. Students with one year of high school Arabic should elect 100B; those with two years should elect 100C. Methodical presentation of structure of language through hearing, speaking, reading, and writing Arabic.

200ABC Intermediate Arabic (4-4-4)

Prerequisite: Arabic 100C. Emphasis on understanding and speaking Arabic; reading and writing of formal Arabic.

CHINESE

The Department of Foreign Languages and Literatures does not offer a major leading to the Bachelor of Arts degree in Chinese, or a minor to accompany a major in another field. However, the courses offered can be of value to students interested in the history of China and the Far East, in political science, or in employment with the government, international business firms, or international agencies.

The Credential Program

The Department of Foreign Languages and Literatures shares partial responsibility for the Bilingual/Crosscultural Specialist Credential, including content in Chinese. For detailed information on this credential, students should consult advisers in the department and in the School of Education.

Courses of Instruction—Chinese

Lower Division Courses

100ABC Elementary Chinese (4-4-4)

Must be taken in sequence. Students with one year of high school Chinese should elect 100B; those with two years should elect 100C. Methodical presentation of structure of language through hearing, speaking, reading, and writing Chinese.

200ABC Intermediate Chinese (4-4-4)

Prerequisite: Chinese 100C or three years of high school Chinese for 200A; students with four years of high school Chinese should elect 200B. Emphasis on understanding and speaking Chinese; rapid reading of Chinese for comprehension, grammar review, writing.

Upper Division Courses

300 Conversation and Composition (4)

Prerequisite: Chinese 200C or equivalent. Practice in oral and written Chinese. Emphasis on fluency, correct expression in writing, and vocabulary expansion through reading contemporary literature.

301AB Conversational Cantonese (2-2)

Prerequisite: Chinese 200C. Intensive practice in spoken Cantonese; emphasis on fluency, correct expressions and colloquial idioms.

310 Chinese Civilization (4)

Major cultural and social trends of China from beginning to present. Conducted in English.

322 Newspaper and Business Chinese (4)

Prerequisite: Chinese 300 or equivalent. Emphasis on abbreviated phrases used in contemporary newspapers and magazines. Extensive reading in leading newspapers and magazines from People's Republic of China, Republic of China, Hong Kong.

399 Directed Reading (1-4)

Prerequisite: Chinese 200C or consent of instructor. Readings in Chinese on topics of individual interest under direction of a faculty member; regular oral and written reports in Chinese.

401 Chinese Literature I (4)

Chinese literature from early periods to 13th century. Conducted in English.

402 Chinese Literature II (4)

Chinese literature from 13th century to present. Conducted in English.

FRENCH

The undergraduate program in French includes a major for the Bachelor of Arts degree and a minor to accompany a major in another field. The Master of Arts degree program is described in the *Graduate Programs* section.

The programs are designed to offer students proficiency in the language and intensive study of

the major genres in French literature as well as French culture and civilization.

Requirements for the Major

A total of 62 units in French, 24 of which must be earned in residence at Cal State L.A. is required. French 100ABC is prerequisite to all undergraduate programs; this prerequisite may be satisfied by appropriate high school preparation or by examination.

Lower Division

Required in French (14 units):

200AB Intermediate French (6-6)

201 Conversation and Composition (2)

Upper Division

Required in French (24 units):

NOTE: With adviser's approval, students not preparing to teach may substitute French 399 or additional literature courses for courses marked below with double asterisk (**). A maximum of four units is allowed in courses taught in English (French 461 and 471).

300 Grammar and Reading (4)

301 Advanced Conversation and Composition (4)

305 Phonetics (4)**

310A French Culture and Institutions (4)

400 Advanced Syntax (4)**

401 Cours de Style (4)**

Electives in French (24 units):

Select from following:

310B French Culture and Institutions (4)

413 French Literature of 16th Century (4)

414 French Literature of 17th Century (4)

415 French Literature: Prelude to Revolution (4)

420 French Novel of 19th Century (4)

430 French Theatre of 20th Century Prior to World War II (4)

431 French Novel of 20th Century Prior to World War II (4)

440 French Poetry from Baudelaire to Symbolism (4)

460 Masters of French Literature (4)

461 Masters of French Literature in Translation (4)

or

471 The French Film (4)

NOTE: Students may not select 461 if it repeats subject taken in 460.

499 Undergraduate Directed Study (1-4)

Minor in French

A minor in French is available for students majoring in other fields. It may be of particular value to students interested in the history of Europe in general and France especially, in political science, or in employment with the government, international business firms, or international agencies.

A total of 34 units in French, of which 14 are in lower division and 20 are in upper division courses, is required.

Lower Division

Required in French (14 units):

200AB Intermediate French (6-6)

201 Conversation and Composition (2)

Upper Division

Required in French (20 units):

300 Grammar and Reading (4)

301 Advanced Conversation and Composition (4)

Select *one* or *both* of following:

310A French Culture and Institutions (4)

310B French Culture and Institutions (4)

Select additional courses from following to complete 20-unit upper division requirement:

413 French Literature of 16th Century (4)

414 French Literature of 17th Century (4)

415 French Literature of Enlightenment: Prelude to Revolution (4)

420 French Novel of 19th Century (4)

430 French Theatre of 20th Century Prior to World War II (4)

431 French Novel of 20th Century Prior to World War II (4)

440 French Poetry from Baudelaire to Symbolism (4)

460 Masters of French Literature (4)

The Credential Program

The Bachelor of Arts degree program in French has been approved by the Commission for Teacher Preparation and Licensing for examination waiver for the single subject credential in Foreign Languages. Students should consult advisers in the department and in the School of Education.

Courses of Instruction—French

Lower Division Courses

100ABC Elementary French (4-4-4)

Must be taken in sequence. Students with one year of high school French should elect 100B, those with two years should elect 100C. Methodical presentation of structure of the language through hearing, speaking, reading, and writing French.

111 French for Reading Comprehension (4)

Techniques for reading French texts in various subject areas. Rapid acquisition of vocabulary and study of basic syntax. Especially recommended for graduate students desiring reading knowledge of French.

200AB Intermediate French (6-6)

Must be taken in sequence. Students with three years of high school French should elect 200A. Students with four years of high school French should elect 200B. Students with equivalent background may request placement by examination. Emphasis on understanding and speaking French, reading for analysis and comprehension, grammar review, and writing.

201 Conversation and Composition (2)

Prerequisite: French 100C. Practice in oral and written French expression of intermediate difficulty; development of fluency and accuracy.

Upper Division Courses

All upper division courses except 461 and 471 are conducted in French.

300 Grammar and Reading (4)

Prerequisite: French 200AB. Complete review of basic French structures and morphology; grammatical and stylistic analysis of difficult French texts; reading for comprehension, vocabulary-building.

301 Advanced Conversation and Composition (4)

Prerequisite: French 300. Practice in oral and written French expression; development of fluency and accuracy approximating native skill.

305 Phonetics (4)

Prerequisites: French 200AB and 201 or equivalent. Production of French sounds such as assimilation, liaison, vowel length, rhythm, accent, intonation, etc. Laboratory practice in pronunciation.

310AB French Culture and Institutions (4-4)

Prerequisite: French 301. Contribution of France to western world; origin and development of its political and social institutions, as well as evolution of its literature, thought, and art.

399 Directed Reading (1-4)

Prerequisites: French 300 or equivalent, a 3.0 grade point average in French, and consent of adviser. Readings in French on topics of interest to student under direction of a faculty member; weekly or bi-weekly oral and/or written reports and critiques of student progress.

400 Advanced Syntax (4)

Prerequisite: French 300 or equivalent. Intensive study of difficulties of French grammar, in preparation for teaching or other professional use of the language.

401 Cours de Style (4)

Prerequisite: French 300. Writing and analysis of literary French.

413 French Literature of 16th Century (4)

Prerequisite: French 301. French Renaissance authors Marot, Scève, Ronsard, du Bellay, Rabelais, Montaigne; their position in European Renaissance and influence on subsequent literary history.

414 French Literature of 17th Century (4)

Prerequisite: French 301. French classic writers Descartes, Corneille, Racine, Molière, Pascal, La Fontaine, Boileau against background of their day, and their contributions to literature in France and abroad.

415 French Literature: Prelude to Revolution (4)

Prerequisite: French 301. Great writers of the Enlightenment: Philosophers and encyclopedists Montesquieu, Voltaire, Diderot, and Rousseau; character and influences of eighteenth century French literature.

420 French Novel of the 19th Century (4)

Prerequisite: French 301. Decisive trends in, and major works of, French novel of nineteenth century; impact of Balzac, Stendhal, Flaubert, Hugo, Zola, and de Maupassant on Western thought.

430 French Theatre of 20th Century Prior to World War II (4)

Prerequisite: French 301. Great dramatists of twentieth century prior to World War II: Claudel, Pagnol, Romain, Salacrou, Cocteau, Giraudoux, Anouilh, Monthérent; general trends of twentieth century French theatre.

431 French Novel of 20th Century Prior to World War II (4)

Prerequisite: French 301. Great novelists of twentieth century prior to World War II: Proust, Gide, Martin du Gard, Duhamel, Romain, Mauriac, Bernanos, Colette, Malraux, Sartre; general trends of twentieth century French novel.

440 French Poetry from Baudelaire to Symbolism (4)

Prerequisite: French 301. French poetic evolution: pre-symbolists and symbolists.

460 Masters of French Literature (4)

Prerequisite: French 301. Outstanding French writers from Middle Ages to present; one author studied each time course offered. May be repeated as subject matter changes.

461 Masters of French Literature in Translation (4)

Study of one or several French authors whose writings are of special significance today. Conducted in English; may be repeated as subject matter changes.

471 The French Film (4)

Study of great traditions and personal styles of outstanding film makers. Critique and literary analysis of intellectual approach in French cinema. Conducted in English.

499 Undergraduate Directed Study (1-4)

Prerequisites: Grade point average of 3.0 in French, senior or graduate standing, and consent of adviser. Project selected in conference with instructor before registration; progress meetings held regularly and culminating in written reports. May be repeated to maximum of 4 units.

GERMAN

The Bachelor of Arts degree in German is available in two options. Both programs are designed to offer students proficiency in the language and study of German literature as well as German culture and civilization. The credential option is specifically designed for students interested in pursuing a teaching career. The department also offers a minor in German for students majoring in other fields.

Requirements for the Major

Required for the major are 28 units of core courses and 32 additional units in either the General Option or the option for the credential. Of the total 60 units required for either program, 24 must be earned in residence at Cal State L.A. German 100ABC is prerequisite to the major; this prerequisite may be satisfied by high school preparation or by examination.

Core Requirements**Lower Division**

Required in German (16 units):

200ABC Intermediate German (4-4-4)

201 Spoken German (4)

Upper Division

Required in German (12 units):

300 Conversation and Composition I (4)

301 Conversation and Composition II (4)

310 German Civilization (4)

General Option

Electives in German (32 units):

Select from following with approval of adviser:

320 German Phonology (4)

330 The German Short Story (4)

399 Directed Reading (1-4)

400 German Syntax (4)

410 Language of Contemporary German Newspapers and Magazines (4)

422 Modern German Drama (4)

430 The German Essay (4)

434 The German Radio Play (4)

460 Selected Studies in German (4)

499 Undergraduate Directed Study (1-4)

Option for Single Subject Credential

Required in German (12 units):

320 German Phonology (4)

400 German Syntax (4)

410 Language of Contemporary German Newspapers and Magazines (4)

Electives in German (20 units):

Select from following with approval of adviser:

330 The German Short Story (4)

399 Directed Reading (1-4)

422 Modern German Drama (4)

430 The German Essay (4)

434 The German Radio Play (4)

460 Selected Studies in German (4)

499 Undergraduate Directed Study (1-4)

Minor in German

A minor in German, totaling 32 units, is available for students majoring in other fields. It may be of particular value to students interested in the history of Europe in general and Germany especially, in political science, or in employment with the government, international business firms, or international agencies.

German 100ABC is prerequisite to this program

and may be satisfied by appropriate high school preparation or by examination.

Lower Division

Required in German (12 units):

200ABC Intermediate German (4-4-4)

Upper Division

Required in German (12 units):

300 Conversation and Composition I (4)

301 Conversation and Composition II (4)

310 German Civilization (4)

Electives in German (8 units):

Select from elective courses shown for major.

The Credential Program

The Bachelor of Arts degree program in German with the credential option is intended for examination waiver for the single subject credential in Foreign Languages. Students should consult advisers in the department and in the School of Education.

Courses of Instruction—German

Lower Division Courses

100ABC Elementary German (4-4-4)

Must be taken in sequence. Students with one year of high school German should elect 100B; those with two years should elect 100C. Methodical presentation of structure of language through hearing, speaking, reading, and writing German.

111 German for Reading Comprehension (4)

Techniques for reading German texts in various subject areas. Rapid acquisition of vocabulary and study of basic syntax.

200ABC Intermediate German (4-4-4)

Must be taken in sequence. Students with German 100C or three years of high school German should elect 200A; those with four years of high school German should elect 200B. Emphasis on understanding and speaking German; rapid reading of German for comprehension, grammar review, writing.

201 Spoken German (4)

Prerequisite: German 100C or equivalent. Intensive practice in spoken German at intermediate level. Intended for non-natives only.

Upper Division Courses

All upper division courses are conducted in German.

300 Conversation and Composition I (4)

Prerequisite: German 200C. Emphasis on spoken and written German; vocabulary building, readings in contemporary German prose.

301 Conversation and Composition II (4)

Prerequisite: German 200C. Review of grammar, writing of German, drill in more difficult patterns of speech; explications of texts.

310 German Civilization (4)

Prerequisite: German 200C or equivalent. Significant aspects of German civilization and culture.

320 German Phonology (4)

Prerequisite: German 200A. Production and combination of German speech sounds. Emphasis on relationship between sound and meaning. Practice in language laboratory.

330 The German Short Story (4)

Prerequisite: German 200C. Introductory study of selected German short stories, with emphasis upon thematic and structural variety.

399 Directed Reading (1-4)

Prerequisite: German 200C or consent of instructor. Readings in German on topics of interest to student under direction of a faculty member; regular oral reports in German.

400 German Syntax (4)

Prerequisite: German 301. Comprehensive study of German grammar and usage, in preparation for teaching or other professional use of the language.

410 Language of Contemporary German Newspapers and Magazines (4)

Prerequisite: German 301. German language of printed mass media. Extensive reading in leading German newspapers and magazines.

422 Modern German Drama (4)

Prerequisites: German 300 and 301. Principal German dramatists of Twentieth Century.

430 The German Essay (4)

Prerequisites: German 300 and 301. Selected German essays with emphasis on their topics and analysis of their style.

434 The German Radio Play (4)

Prerequisite: German 301. Selected German radio plays, with emphasis on their themes and structures.

460 Selected Studies in German (4)

Prerequisite: Consent of instructor. Study of one German writer or one period of German literature. May be repeated for credit as subject matter changes.

499 Undergraduate Directed Study (1-4)

Prerequisites: Ability to do independent work; senior or graduate standing and consent of an instructor to act as sponsor. Independent work in written and oral reports. Project selected in conference with the sponsor before registration; regular progress meetings.

HEBREW

The Department of Foreign Languages and Literatures does not offer a major leading to the Bachelor of Arts degree in Hebrew, or a minor to accompany a major in another field. However, the courses offered can be of value to students

interested in Biblical or Judaic studies, in history of the Middle East, in political science, or in employment with the government, international business firms, or international agencies.

Courses of Instruction—Hebrew

101ABC Elementary Modern Hebrew I, II, III (4-4-4)

Must be taken in sequence. Students with one year of high school Hebrew should elect 101B; with two years, 101C; with three years, 201A. Study of the language through hearing, speaking, writing, and structural analysis of modern Hebrew.

201ABC Intermediate Modern Hebrew I, II, III (4-4-4)

Prerequisite: Hebrew 101ABC or equivalent, or consent of instructor. Further development of fluency in speech, aural comprehension, and reading and writing of modern Hebrew.

JAPANESE

The program in Japanese includes a major for the Bachelor of Arts degree with three options and a minor. The options are: Japanese Language and Literature, Japanese Area Studies, and the option for the Single Subject Credential. The Japanese Language and Literature program is designed to offer students proficiency in the language and in-depth study of Japanese literature and civilization. The Area Studies option is designed to offer a broad scope of Japanese social and cultural studies together with competence in the language. The credential option is intended as preparation for the single subject credential in foreign languages.

Requirements for the Major

Requirements for the major vary depending upon the option selected. Options I and II require a total of 68 units, 48 of which are in the core program listed below and 20 units are within the option programs. Option III requires a total of 64 units, 20 of which are lower division and 44 are in upper division courses. All programs require that a minimum of 24 units be earned in residence at Cal State L.A. Japanese 100ABC, prerequisite to the major, can be satisfied by appropriate high school preparation or by examination.

Core Requirements for Options I and II

Lower Division

Required in Japanese (20 units):

200ABC Intermediate Japanese (4-4-4)

201AB Intermediate Conversation (4-4)

Elective in Japanese (0-4 units):

202AB Calligraphy I, II (2-2)

Upper Division

Required in Japanese (28 units):

300ABC Advanced Reading, Composition, and Grammar (4-4-4)

305 Survey of Japanese Literature I (4)

306 Survey of Japanese Literature II (4)

310 Japanese Civilization to 1600 (4)

311 Japanese Civilization Since 1600 (4)

Electives in Japanese (12-16 units):

Select from following:

320 Modern Japanese Structure (4)

399 Directed Reading (1-4)

406 Japanese Poetry (4)

408 Japanese Prose (4)

410 Modern Japanese Novel (4)

460 Masters of Japanese Thought (4)

Option I:

Japanese Language and Literature

In addition to completion of the core requirements above, students select 20 units in Japanese elective courses. At least 8 units must be in upper division literature courses; Japanese 399 may be included when topic is appropriate to literature.

Option II:

Japanese Area Studies

In addition to completion of the core requirements above, students select 4 units in Japanese elective courses, and 16 units from following:

Art 431 Oriental Art (4)

Chinese 310 Chinese Civilization (4)

Geography 425 Geography of Japan (4)

History 150 Asian-American History (4)

History 495A Traditional Japan (4)

History 495B Modern Japan (4)

Philosophy 437 Philosophy of China and Japan (4)

Political Science 438 Government and Politics of Japan (4)

Option III:

Single Subject Credential

Lower Division

Required in Japanese (20 units):

200ABC Intermediate Japanese (4-4-4)

201AB Intermediate Conversation (4-4)

Upper Division

Required in Japanese (28 units):

300ABC Advanced Reading, Composition, and Grammar (4-4-4)

310 Japanese Civilization to 1600 (4)

320 Modern Japanese Structure (4)

or

325 Classical Japanese Structure (4)

202AB Calligraphy I, II (2-2)

or

460 Masters of Japanese Thought (4)

305 Survey of Japanese Literature I (4)

or

306 Survey of Japanese Literature II (4)

Electives in Japanese (16 units):

Select two from following with approval of adviser:

- 399 Directed Reading (1-4)
- 406 Japanese Poetry (4)
- 408 Japanese Prose (4)
- 410 Modern Japanese Novel (4)

Select two additional courses in Japanese with approval of adviser.

Minor in Japanese

A minor in Japanese is available for students majoring in other fields. The program is in process of modification, and students are advised to consult the department for information on new requirements. This minor may be of particular value to students interested in the history of Asia and the Far East, in political science, or in employment with the government, international business firms, or international agencies.

Japanese 100ABC is prerequisite to this program and may be satisfied by appropriate high school preparation or by examination.

The Credential Program

The Bachelor of Arts degree program in Japanese with the credential option is intended for examination waiver for the single subject credential in Foreign Languages. In addition, the Department of Foreign Languages and Literatures shares partial responsibility for the Bilingual/Cross-cultural Specialist credential, including content in Japanese. For detailed information on both credentials, students should consult advisers in the department and in the School of Education.

Courses of Instruction—Japanese

Lower Division Courses

100ABC Elementary Japanese (4-4-4)

Must be taken in sequence. Students with one year of high school Japanese should elect 100B; those with two years should elect 100C. Methodical presentation of structure of the language through hearing, speaking, reading, and writing Japanese.

200ABC Intermediate Japanese (4-4-4)

Must be taken in sequence. Students with Japanese 100C or three years of high school Japanese should elect 200A; those with four years of high school Japanese should elect 200B. Emphasis on understanding and speaking Japanese; rapid reading of Japanese for comprehension, grammar review, writing.

201AB Intermediate Conversation (4-4)

Prerequisite: Japanese 100C. Intermediate study in spoken Japanese. Emphasis on fluency, correct expression and vocabulary expansion in modern Japanese.

202AB Calligraphy I, II (2-2)

Prerequisite: Japanese 100ABC or consent of instructor. History, theory and esthetics of calligraphy in Japan from early Chinese background to modern period. Actual practice to develop skills in calligraphy, as well as to explore concepts of form, space, and movement.

Upper Division Courses

All upper division courses except 305 and 306 are conducted in Japanese.

300ABC Advanced Reading, Composition, and Grammar (4-4-4)

Prerequisite: Japanese 200C. Reading modern Japanese; review of structure patterns of literary styles, drill on more explicit and complicated expressions in compositions, further study in grammar.

302 Advanced Conversation (4)

Prerequisite: Japanese 201B. Advanced study in modern spoken Japanese. Emphasis on fluent, sophisticated expression and vocabulary expansion.

305 Survey of Japanese Literature I (4)

Survey in English of major trends and works of Japanese literature from earliest era through classical movement of seventeenth century. No knowledge of Japanese required.

306 Survey of Japanese Literature II (4)

Survey in English of major trends, periods and works of Japanese literature from pre-modern movement of seventeenth century to present day. No knowledge of Japanese required.

310 Japanese Civilization to 1600 (4)

Prerequisite: Japanese 200C. Origin and development of Japanese culture: religion, thought, literature, art, and patterns of life from neolithic age to A.D. 1600.

311 Japanese Civilization Since 1600 (4)

Prerequisite: Japanese 200C. Significant aspects of Japanese culture from A.D. 1600 to present; their evolution, characteristics and synthesis in modern period.

320 Modern Japanese Structure (4)

Prerequisite: Japanese 300C. Linguistic structure of modern Japanese. Phonology, morphology and syntax.

325 Classical Japanese Structure (4)

Prerequisite: Japanese 300C. Grammatical structure of classical Japanese language.

395 Japanese in Community Service (1-4)

Prerequisite: Japanese 300C; approval by departmental faculty adviser, with consultation of EPIC Director; acceptance by community agency. Participation in the work of a community agency or campus program utilizing communication skills in Japanese. May be repeated to maximum of 6 units. Graded CR/NC only.

399 Directed Reading (1-4)

Prerequisites: Japanese 200C or consent of instructor. Readings in Japanese on topics of interest to student under the direction of a faculty member; regular oral reports in Japanese.

406 Japanese Poetry (4)

Prerequisites: Japanese 305, 306 and 325. Major forms, including *tanka*, *choka*, *renga*, *haiku*, and *shintaishi*. Emphasis on developments in poetic form and readings of original texts.

408 Japanese Prose (4)

Prerequisites: Japanese 305, 306 and 325. Major forms and works of pre-modern Japanese fiction, including *monogatari*, *nikki*, *gunki*, *setsuwa*, and *ninjobon*. Emphasis on development of prose fiction and reading of original texts.

410 Modern Japanese Novel (4)

Prerequisite: Japanese 300C. Selected major works of fiction since 1868; literature trends of Meiji, Taisho and Showa periods.

460 Masters of Japanese Thought (4)

Prerequisite: Japanese 325. Original works of a major figure in Japanese intellectual history. Individual subjects for study change with each offering. Writers who may be studied include Kukai, Murasaki, Dogen, Shinran, Rikyu, Basho, Saikaku, and Watsuji. May be repeated as subject matter changes.

LATIN

The Department of Foreign Languages and Literatures does not offer a major leading to the Bachelor of Arts degree in Latin, or a minor to accompany a major in another field. However, the courses offered can be of value to students preparing to teach Romance languages, or interested in the Classics and in Roman and Early Christian history.

Courses of Instruction—Latin

100ABC Elementary Latin (4-4-4)

Must be taken in sequence. Students with one year of high school Latin should elect 100B; those with two years should elect 100C. Methodical presentation of structure of language through hearing and translation of Latin classics.

RUSSIAN

The Department of Foreign Languages and Literatures does not offer a major leading to a Bachelor of Arts degree in Russian, however the courses offered may be of value to students who wish to acquire a knowledge of the Russian language, culture and literary forms. For students majoring in other fields, the department offers a minor in Russian.

Minor in Russian

A minor in Russian is available for students majoring in other fields. It may be of particular value to students interested in the history of Europe in general and in Russia especially, in political science, or in employment with the government, international business firms, or international agencies. Required are 28 units, of which 16 are lower division and 12 in upper division courses. Russian 101AB, prerequisite to the minor, may be satisfied by high school preparation or by examination.

Lower Division

Required in Russian (16 units):

- 111 Russian for Reading Comprehension (4)
- 201AB Intermediate Russian (6-6)

Upper Division

Required in Russian (4 units):

- 310 Russian Civilization (4)

Electives in Russian (8 units):

- Select two from following, with approval of adviser:
- 399 Directed Reading (4)
- 402 Russian Short Story (4)
- 403 The Russian Novel (4)

Courses of Instruction—Russian

Lower Division Courses

101AB Elementary Russian (6-6)

Must be taken in sequence. Students with two years of high school Russian should elect 101B. Students with equivalent background may request placement by examination. Methodical presentation of structure of language through hearing, speaking, reading, and writing Russian.

111 Russian for Reading Comprehension (4)

Techniques for reading Russian in various subject areas. Rapid acquisition of vocabulary and study of basic syntax. Especially recommended for graduate students desiring reading knowledge of Russian.

201AB Intermediate Russian (6-6)

Must be taken in sequence. Students with three years of high school Russian should elect 201A. Students with four years of high school Russian should elect 201B. Students with equivalent background may request placement by examination. Emphasis on understanding and speaking Russian, rapid reading of Russian for comprehension, grammar review, and writing.

Upper Division Courses

All upper division courses except 310 are conducted in Russian.

300 Conversation and Composition (4)

Prerequisites: Russian 201B or equivalent. Review of grammar, with emphasis on idiomatic spoken and written Russian. Readings in contemporary Russian prose, vocabulary building; composition on various social, cultural, and literary topics.

301 Advanced Conversation and Composition (4)

Prerequisite: Russian 300 or equivalent. Complete review of grammar as used for communication skills; writing of current idiomatic Russian; drill in more difficult speech patterns; explications of literary texts.

310 Russian Civilization (4)

Major cultural and social trends of Russia from beginning to present. Conducted in English.

399 Directed Reading (1-4)

Prerequisite: Russian 201AB or consent of instructor. Readings in Russian on topics of interest to student, under direction of a faculty member; regular oral reports in Russian.

402 Russian Short Story (4)

Prerequisite: Russian 301 or equivalent. Readings of masters of Russian short story, such as Pushkin, Lermontov, Garshin, Korolenko, Chekhov, Kuprin, Bunin, Il'f, Petrov, and Zoshchenko.

403 Russian Novel (4)

Prerequisite: Russian 301 or equivalent. Representative works of great novelists such as Turgenev, Dostoevsky, Tolstoy, Goncharov, Pasternak, and Solzhenitsyn.

SPANISH

The undergraduate program includes a major for the Bachelor of Arts degree with two options, and a minor for students majoring in other fields. The Master of Arts degree program is described in the *Graduate Programs* section.

Requirements for the Major

Required are 60 units in Spanish courses, of which at least 24 units must be earned in residence at Cal State L.A.

Following a common core, students may select either the option stressing literature or the option which includes linguistic study as well as literature. The first is recommended for students interested in careers other than teaching. The second is recommended for students intending to teach. Spanish 100ABC or equivalent is prerequisite to all undergraduate programs. This prerequisite may be satisfied by appropriate high school preparation or by examination.

Core Requirements**Lower Division**

Required in Spanish (16 units):

200ABC Intermediate Spanish (4-4-4)

201AB Conversation (2-2)

Upper Division

Required in Spanish (20 units):

300AB Composition and Grammar (4-4)

408 Spanish Literature I (4)

410 Spanish Literature II (4)

413 Spanish-American Literature II (4)

Options

Select one of the following option programs:

Option I

Required in Spanish (4 units):

414 Don Quixote de la Mancha (4)

Electives in Spanish (20 units):

Select *three* from following; at least one must be 400-level.

310 Spanish Civilization (4)

315 Spanish-American Civilization (4)

320 Phonetics (4)

400 Problems of Syntax (4)

411 Spanish-American Literature I (4)

Select *two* from following:

417 Spanish-American Short Story (4)

418 Golden Age Prose (4)

421 Mexican Literature of Twentieth Century (4)

424 Golden Age Drama of Spain (4)

426 Nineteenth-Century Spanish Novel (4)

428 The Generation of '98 (4)

460 Masters of Hispanic Culture and Thought; Selected Studies (4)

470 Contemporary Spanish Novel (4)

480 Proseminar: Selected Twentieth Century Spanish Dramatists (4)

483 Contemporary Spanish-American Novel (4)

485 Literature of Argentina and Uruguay (4)

Option II

Required in Spanish (8 units):

320 Phonetics (4)

400 Problems of Syntax (4)

Electives in Spanish (16 units):

Select *one* from following:

310 Spanish Civilization (4)

315 Spanish-American Civilization (4)

Select *three* from following:

411 Spanish-American Literature I (4)

414 Don Quixote de la Mancha (4)

417 Spanish-American Short Story (4)

418 Golden Age Prose (4)

421 Mexican Literature of Twentieth Century (4)

424 Golden Age Drama of Spain (4)

426 Nineteenth-Century Spanish Novel (4)

428 The Generation of '98 (4)

460 Masters of Hispanic Culture and Thought; Selected Studies (4)

470 Contemporary Spanish Novel (4)

480 Proseminar: Selected Twentieth-Century Spanish Dramatists (4)

483 Contemporary Spanish-American Novel (4)

485 Literature of Argentina and Uruguay (4)

Minor in Spanish

A minor in Spanish, totaling 40 units, is available for students majoring in other fields. It may be of particular value to students interested in the history of Spain and Latin America, in political science, or in employment with the government, international business firms, or international agencies.

Spanish 100ABC is prerequisite to this program

and may be satisfied by appropriate high school preparation or by examination.

Lower Division

Required in Spanish (16 units):

200ABC Intermediate Spanish (4-4-4)

201AB Conversation (2-2)

Upper Division

Required in Spanish (20 units):

300AB Composition and Grammar (4-4)

320 Phonetics (4)

408 Spanish Literature I (4)

410 Spanish Literature II (4)

Elective in Spanish (4 units):

Select one from following:

310 Spanish Civilization (4)

315 Spanish-American Civilization (4)

The Credential Program

The Bachelor of Arts degree program in Spanish has been approved by the Commission for Teacher Preparation and Licensing for examination waiver for the single subject credential in Foreign Languages. In addition, the Department of Foreign Languages and Literatures shares partial responsibility for the Bilingual/Crosscultural Specialist credential, including content in Spanish. For detailed information on these credentials, students should consult advisers in the department and in the School of Education.

Courses of Instruction—Spanish

Lower Division Courses

100ABC Elementary Spanish (4-4-4)

Must be taken in sequence. Students with one year of high school Spanish should elect 100B; those with two years high school Spanish should elect 100C. Methodical presentation of structure of the language through hearing, speaking, reading, and writing Spanish.

110 Spanish Conversation for Professions (4)

Course in Spanish conversation which focuses, according to student need, upon vocabulary used in medicine, law enforcement, or the social sciences. Basic grammar presented inductively. May be repeated for credit. May not be taken for credit by Spanish majors. Graded CR/NC only.

200ABC Intermediate Spanish (4-4-4)

Must be taken in sequence. Students with Spanish 100C or three years of high school Spanish should elect 200A; those with four years of high school Spanish should elect 200B. Emphasis on understanding and speaking Spanish; rapid reading of Spanish for comprehension; grammar review, writing.

201AB Conversation (2-2)

Prerequisite: Spanish 100C. Must be taken in sequence. Emphasis on use of spoken Spanish. Group discussions; panel presentations on current developments in the Spanish speaking countries, based on assigned readings

and investigations. Individual reports. Intended for non-natives only.

Upper Division Courses

All upper division courses are conducted in Spanish

300AB Composition and Grammar (4-4)

Prerequisite: Spanish 200C or equivalent. Must be taken in sequence. Intensive review of grammar; student compositions, emphasizing current writing practices in Spanish; letter-writing in Spanish; idiom review.

310 Spanish Civilization (4)

Prerequisite: Spanish 200B. Synthesis of cultural characteristics of Spain.

315 Spanish-American Civilization (4)

Prerequisite: Spanish 200B. Synthesis of cultural characteristics of Spanish America.

320 Phonetics (4)

Prerequisite: Spanish 200B. Production of Spanish sounds; analysis of information, rhythm, accentuation, vowel length, vowel linkage; laboratory practice in pronunciation.

395N Spanish in Community Service (1-4)

Prerequisites: Spanish 300B, approval of departmental faculty adviser in consultation with EPIC Director, and acceptance by community agency. Participation in work of a community agency or program utilizing communication skills in Spanish. Graded CR/NC only. May be repeated once to maximum of 6 units.

399 Directed Reading (1-4)

Prerequisites: Spanish 200C or consent of instructor. Readings in Spanish on topics of interest to student, under direction of a faculty member; regular oral reports in Spanish.

400 Problems of Syntax (4)

Prerequisite: Spanish 300B. Intensive study of Spanish grammar in preparation for teaching; original written compositions, translation of contemporary English and American short stories.

408 Spanish Literature I (4)

Prerequisite: Spanish 300B or equivalent. Introduction to Spanish Literature from medieval period through the Golden Age.

410 Spanish Literature II (4)

Prerequisite: Spanish 300B or equivalent. Introduction to Spanish literature from 1700 to present.

411 Spanish-American Literature I (4)

Prerequisite: Spanish 300B. Spanish-American literature from the Conquest to 1888.

413 Spanish-American Literature II (4)

Prerequisite: Spanish 300B. Spanish-American literature from 1888 to present.

414 Don Quixote de la Mancha (4)

Prerequisites: Spanish 408 and 410. Reading and analysis of *Don Quixote de la Mancha*.

417 Spanish-American Short Story (4)

Prerequisites: Spanish 411, 413, and one additional upper division literature course in Spanish. Spanish-American short story from the *Tradiciones* of Ricardo Palma to the present.

418 Golden-Age Prose (4)

Prerequisites: Spanish 408 and 410. Reading and analysis of prominent prose writers of the Golden Age.

421 Mexican Literature of 20th Century (4)

Prerequisites: Spanish 413 and two additional upper division literature courses in Spanish. Intensive study of significant works and movements of Mexican literature from 1900 to present.

424 Golden-Age Drama of Spain (4)

Prerequisites: Spanish 408 and 410. Principal Spanish dramatists of the Golden Age, their thematic, poetic, social and historical values and their influence on and contrast to subsequent literary history.

426 Nineteenth-Century Spanish Novel (4)

Prerequisites: Spanish 408 and 410. Intensive study of novelists of nineteenth-century Spain.

428 The Generation of '98 (4)

Prerequisites: Spanish 408 and 410. Intensive study of poets, novelists and essayists who promoted literary revival following 1898.

460 Masters of Hispanic Culture and Thought: Selected Studies (4)

Prerequisites: Three upper division literature courses, including relevant introductory literature course. Out-

standing Spanish and Spanish-American writers from Middle Ages to present; an individual author will be studied at each offering. May be repeated as subject matter changes.

461N Twentieth Century Spanish-American Fiction in Translation (4)

Prerequisite: English 221 or 250, or any upper division foreign language literature course. Representative works of 20th century Spanish-American fiction; novel and short story in translation.

470 Contemporary Spanish Novel (4)

Prerequisites: Spanish 408 and 410. Intensive study of the Spanish novel of the past thirty years.

480 Proseminar: Selected 20th Century Spanish Dramatists (4)

Prerequisites: Spanish 408 and 410. Intensive study of selected Spanish dramatists from 1900 to present. Specific course content will vary from quarter to quarter. May be repeated once as subject matter changes.

483 Contemporary Spanish-American Novel (4)

Prerequisites: Spanish 413 and two additional upper division literature courses in Spanish. Intensive study of the Spanish-American novel of the past thirty years.

485 Literature of Argentina and Uruguay (4)

Prerequisites: Spanish 413 and two other upper division Spanish language literature courses. Representative works of Argentine and Uruguayan literature; drama, essay, poetry, prose fiction.

499 Undergraduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Project selected in conference with sponsor before registration; progress meetings held regularly, and final report submitted. May be repeated for credit.

Geography

In School of Letters and Science

Geography seeks to describe and interpret the pattern of natural and human features on the earth. The Department of Geography offers an undergraduate program leading to the Bachelor of Arts degree, described below, and a graduate program leading to the Master of Arts degree, described in the *Graduate Programs* section.

The department also cooperates in the American Studies, Latin American Studies, Liberal Studies, and Social Science interdisciplinary programs and administers the Urban Studies interdisciplinary program. Its regional courses are of particular value to programs which utilize materials on California, Asia, Anglo-America, Latin America, Europe, and the developing countries. The department also participates in the Mexico Field Station program, an intensive field experience in which classes are conducted completely on location in Mexico.

The Faculty

Professors: William G. Byron (Chairperson), Harry C. Coffin, Midori Nishi, William S. Ting.

Associate Professors: Richard Arvidson, Thomas D. Best, Sin Fong Han, Vincent Mazzucchelli, Clement Padick, David R. Radell.

Assistant Professors: Norman Gosenfeld, John D. Rees.

The Undergraduate Program

The Bachelor of Arts degree in Geography is available in two options. The General Option is designed for those who seek a liberal arts education or who are interested in professional preparation in geography, regional planning, environmental study, cartography or allied fields. The second option is designed to prepare students for a California teaching credential in the social sciences.

Requirements for the Major

The General Option requires completion of 73 units of which 12 are in lower division and 61 are in upper division Geography courses. The option for the Single Subject Credential in Social Science requires completion of 82–85 units of which 12 are in lower division and 70–73 are in upper division courses in Geography and related fields.

General Option

Lower Division

Required in Geography (12 units):

- 150 Human Geography (4)
- 160 Physical Geography (4)
- 210 Map Reading and Interpretation (4)

Upper Division

Required in Geography (13 units):

- 357 Geographic Writing (4)
- 460 Field Geography (5)
- 495 Geography Proseminar (4)

Methodology (8 units):

Select two from following in Geography:

- 301, 405, 453, 465

Systematic Physical Geography (8 units):

Select two from following:

- 360, 402, 410, 415

Systematic Human Geography (8 units):

Select two from following:

- 441, 442, 475, 476, 481

Regional Geography (8 units):

Select two from following:

- 420, 421, 423, 424, 425, 427, 428, 430, 431

Electives in Geography (16 units):

Select additional courses from above groups or from following:

- 370, 398, 439, 446, 466, 467, 471, 477, 478, 496, 497, 499

Option for Single Subject Credential in Social Science

Lower Division

Required in Geography (12 units):

- 150 Human Geography (4)
- 160 Physical Geography (4)
- 210 Map Reading and Interpretation (4)

Upper Division

Required in Geography (17 units):

- 370 World Regional Geography (4)
- 415 Geographic Perspectives on Environment (4)
- 431 California Geography (4)
- 460 Field Geography (5)

Electives in Geography (12 units):

Select one course from each of following three groups:

Systematic Physical Geography:

- 360, 402, 410

Systematic Human Geography:

- 441, 442, 475, 476, 481

Regional Geography:

- 420, 421, 423, 424, 425, 427, 428, 430

Select additional courses from above groups or from following:

357, 398, 401, 405, 439, 446, 453, 465, 466, 467, 471, 477, 478, 495, 496, 497, 499

Required in Related Fields (28 units minimum):

Select courses from following six fields; at least one course must be taken in each of four of the fields.

Anthropology 250, 401, 403-413, 433, 435, 439

Economics 150, 301, 350, 440, 445, 460, 471

History 101AB, 202AB, 410-496

Psychology 150, 308, 408, 410AB, 420, 422, 439

Political Science 150, 200, 250, 403, 413, 415, 421, 431-439

Sociology 250, 370, 414, 415, 422, 424, 430, 434, 442, 460

Minor in Geography

A minor in Geography is available for students majoring in other fields. A total of 28 units in Geography is required, selected in consultation with an adviser in Geography, and distributed as follows:

Required in Geography (8 units):

150 Human Geography (4)

160 Physical Geography (4)

Electives in Geography (20 units):

Select a minimum of 20 units with consent of adviser.

At least 14 units must be in upper division.

Geography Concentration for Social Science Major

The requirements for this major are described under Social Science.

The Credential Program

The Bachelor of Arts degree program in Geography has been approved by the Commission for Teacher Preparation and Licensing for examination waiver for the single subject credential in Social Science. Students should consult advisers in the department and in the School of Education.

Courses of Instruction

Lower Division Courses

150 Human Geography (4)

Areal studies of peoples of world and their settlement characteristics; evaluation of origins, dispersals, and contemporary distributions of representative ways that man lives on the earth.

160 Physical Geography (4)

Natural environment of man; nature, distribution and relationships of climate, landforms, vegetation, hydrography, and soils.

210 Map Reading and Interpretation (4)

Prerequisites: Geography 150 and 160. Nature of maps and their interpretation. Lecture 2 hours, laboratory 4 hours.

Upper Division Courses

Unless otherwise stated, the prerequisite for all 400-level courses in Geography is 150 or 160 or 370, or consent of instructor.

301 Quantitative Geography (4)

Prerequisites: Mathematics 102 and Geography 150 or 160, or consent of instructor. Introductory numerical and statistical applications in geography including measurements, geometrics, distributions, correlations, hypothesis testing, time series and elementary bi-variate analysis. Lecture 2 hours, laboratory 4 hours.

357 Geographic Writing (4)

Prerequisite: English 150A or B. Writing skills and techniques for presentation of geographic information.

360 Elements of Meteorology (4)

Introduction to dynamic and synoptic relationships of weather elements.

370 World Regional Geography (4)

Major physical regions of world and their occupational development by man.

398 Cooperative Education (1-3)

Prerequisites: Overall g.p.a. of 2.35, upper division standing in departmental major or minor, and approval of departmental coordinator prior to registration. Active employment, with regular meetings to discuss student's progress. May be repeated to maximum of 6 units.

402 Geomorphology (4)

Prerequisites: Geography 160 and 210, or Geology 150. Identification and interpretation of landforms. Local field trip.

405 Cartography (4)

Prerequisite: Geography 210 or consent of instructor. Design and drafting of maps. Lecture 3 hours, laboratory 3 hours.

410 Climatology (4)

Prerequisite: Geography 360. Climates of the earth, their distribution, processes, variations, classifications; microclimates and modification of climates.

415 Geographic Perspectives on Environment (4)

Environmental interactions in subsistence and urban-industrial societies; impact of human activities on environment: modification of vegetation, hydrology and landforms, accelerated soil erosion, climatic change; environmental perception; awareness of and adjustment to natural hazards.

420 Geography of Humid Tropics (4)

Systematic analysis of man-land ecosystem in humid tropics; emphasis on past cultural features, present socio-economic problems, and future developments in humid tropical world.

421 Geography of U.S. and Canada (4)

Prerequisite: Completion of Geography 265 recommended. Identification and interpretation of significant regional characteristics within United States and Canada.

423 Geography of Europe (4)

Analysis of physical and cultural features of Europe.

424 Geography of Asia (4)

Analysis of human, cultural and physical features of South, Southeast, Central Asia and Far East; emphasis on roles of Asian nations and peoples in world relationships.

425 Geography of Japan (4)

Interpretation of population and economic problems, socio-cultural patterns, and physical features of the land.

427 Geography of Middle America (4)

Nature of the land and characteristics of man's settlement features in Mexico, Central America and islands of Caribbean.

428 Geography of South America (4)

Character of physical and cultural environment in countries of South America.

430 Geography of China (4)

Physical and economic regional geography of China and its inner-Asian frontiers, including study of its demography, industrial and agricultural development, transportation and energy infrastructure.

431 Geography of California (4)

Physical environments of California and man's settlement features, past and present.

439 Environmental Perception (4)

(Also listed as *Psychology 439*)

Role of perception in landscape evaluation. Lecture 2 hours, laboratory 4 hours.

441 World Resources (4)

Resources available to man as natural biotic materials, physical bases for agriculture, earth materials, and space for cultural developments.

442 Population Geography (4)

Spatial analysis of demographic variables with emphasis on environmental, social and economic factors influencing population distribution and mobility; population growth in relation to resource utilization.

446 Geography of U.S. Ethnic Communities (4)

Examination and analysis of spatial structure and organization of selected ethnic communities in the United States and their interrelationships with American composite cultural environment.

453 Locational Analysis (4)

Location and spatial distribution of economic activities; development and applicability of various locational models in geography; agricultural, industrial, central place, intra-city, social gravity and spatial interaction models; emphasis on development of dynamic geographic models pertaining to regional planning. Lecture 2 hours, laboratory 4 hours.

460 Field Geography (5)

Prerequisites: One of the following sequences: Geography 150, 160 and 210; Geography 210 and 370. Field identification and interpretation of natural and man-made features, and methods used therein. Lecture 2 hours, field work 6 hours. May be repeated once for credit with provision that one enrollment is in program conducted at an off-campus field center.

465 Air Photo Interpretation (4)

Prerequisite: Geography 210. Interpretation of natural and cultural landscapes as revealed in aerial photographs. Lecture 2 hours, laboratory 4 hours.

466 Remote Sensing of Environment (4)

Prerequisite: Geography 465 or consent of instructor. Analysis of natural and cultural features of earth's environment using photographic, infrared and microwave imagery. Lecture 2 hours, laboratory 4 hours.

467 Geography of Transportation (4)

Modes of movement of people, products, and ideas; their impacts on spatial patterns and landscapes.

471 Advanced Cartography (4)

Prerequisite: Geography 405. Advanced methods of cartographic rendering, including reproduction, negative scribing, color separation, terrain rendering, and plastic shading. Lecture 3 hours, laboratory 3 hours.

475 Geography of Settlement (4)

Man's manner of settling new lands and resettling old lands, with special emphasis on form and function of resulting settlements.

476 Geography of Urban Areas (4)

Analysis of distribution of world's cities, and investigation of function and form of representative urban areas. Field trips required.

477 Urban Issues I (4)

Issues relating to physical, technological, and economic characteristics and functions of urban areas. Lecture 3 hours, laboratory 3 hours (field trips and directed urban encounter).

478 Urban Issues II (4)

Prerequisite: Geography 477 (may be taken concurrently). Issues relating to political, social, educational, and mental health characteristics and functions of urban areas. Lecture 3 hours, laboratory 3 hours (field trips and directed urban encounter).

481 Political Geography (4)

Physical and cultural phenomena that relate to problems and policies of world's states.

495 Geography Proseminar (4)

Prerequisites: Major in Geography, at least 12 upper division units in Geography, and senior standing. Criticism, methods of organization and preparation of geographical essays; field and scientific reports, with emphasis on bibliographic sources and development of writing skills.

496 Special Topics in Geography (1-4)

Prerequisites: As needed for specific topic. Specialized systematic and regional topics in geography. Subject announced in *Schedule of Classes*. May be taken concurrently with Geography 497. Lecture 1-4 hours. May be repeated as subject matter changes.

497 Special Topics in Geography (1-4)

Prerequisites: As needed for specific topic. Subject announced in *Schedule of Classes*. May be taken concurrently with Geography 496. Activity 2-8 hours. May be repeated for credit as subject matter changes.

499 Undergraduate Directed Study (1-4)

Prerequisites: Consent of an instructor to act as sponsor; ability to do independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly. May be repeated to maximum of 8 units as subject matter changes.

Geology

In School of Letters and Science

The Department of Geology offers the Bachelor of Science and Bachelor of Arts degrees, a Master of Science degree jointly with other California State Universities, and a minor for students majoring in other fields. The Master of Science degree program is described in the *Graduate Programs* section.

Programs in Geology develop a comprehensive study of earth materials, structures and phenomena. Courses to serve both general and professional interests are offered.

The Faculty

Professors: Ivan P. Colburn, Alan A. Colville (Chairperson), Perry L. Ehlig, Robert F. Meade, Martin L. Stout.

Associate Professors: Terry E. Davis, Gary A. Novak, Robert J. Stull.

The Undergraduate Program

Two baccalaureate degree programs are offered. The Bachelor of Science degree program provides study in depth for professional work or graduate study, and the Bachelor of Arts degree program has a liberal arts emphasis but provides adequate preparation for graduate work.

Bachelor of Science Degree

The Bachelor of Science degree program in Geology requires a total of 198 quarter units, and is designed for students who plan professional geological careers in government and industry, or graduate study in geology and related fields.

Requirements for the Major

A total of 124 units of geology, related physical sciences, and mathematics are required for the Bachelor of Science major. Fifty-nine to 60 units are in lower division courses, and 64–65 are in upper division geology courses.

Lower Division

Required in Geology (4–5 units):

Students may begin major with one of following:

- (1) 150 Physical Geology (4)
- (2) 155 Oceanography (4)
 - 157 Physical Geology Laboratory (1)
- (3) 422 Environmental Geology (4)
 - 157 Physical Geology Laboratory (1)

Additional Requirements (48 units):

In Geology:

- 152 Historical Geology (4)
- 201 Mineralogy and Crystallography I (3)
- 202 Mineralogy and Crystallography II (3)
- 256 Geology Colloquium I (1-1-1)

In Mathematics:

- 206–207 Calculus I, II (4-4)

In Chemistry:

- 101–103 General Chemistry I–III (5-5-5)

In Physics:

- 201–203 General Physics I–III (4-4-4)

Electives (7 units):

Select additional courses in physics, mathematics, chemistry, computer operations, biology or engineering, with approval of adviser.

Upper Division

Required in Geology (53 units):

- 356 Geology Colloquium II (1-1-1)
- 360 Geological Mapping (3)
- 370 Geochemistry (4)
- 401 Igneous and Metamorphic Petrology (5)
- 402 Sedimentary Petrology (4)
- 410 Structural Geology (5)
- 430 Stratigraphy (4)
- 431 Invertebrate Paleontology (5)
- 441 Optical Mineralogy (5)
- 460A Summer Field Geology I (4)
- 460B Report for Field Geology I (2)
- 461A Summer Field Geology II (4)
- 461B Report for Field Geology (2)
- 497 Senior Problem (3)

Electives in Geology (11–12 units):

Select with approval of adviser. Geology 421 and 422 are not acceptable as electives. If Geology 422 has been used as a substitute course to meet lower division requirements, its units are accounted for under required courses.

Bachelor of Arts Degree

The Bachelor of Arts degree program, which requires 186 units, is designed for students who desire a liberal arts education with a major in Geology, or for those who wish to study the less quantitative aspects of Geology.

Requirements for the Major

A total of 106–108 units in Geology, related physical sciences, and mathematics is required for the Bachelor of Arts major in Geology. Fifty to 55 units are in lower division and 53 are in upper division courses.

Lower Division

Required in Geology (4-5 units):

Students may begin major with one of following:

- (1) 150 Physical Geology (4)
- (2) 155 Oceanography (4)
- 157 Physical Geology Laboratory (1)
- (3) 422 Environmental Geology (4)
- 157 Physical Geology Laboratory (1)

Additional Requirements (49-50 units):

In Geology:

- 151 Physical Geology Laboratory (2)
- 152 Historical Geology (4)
- 201 Mineralogy and Crystallography I (3)
- 202 Mineralogy and Crystallography II (3)
- 256 Geology Colloquium I (1-1-1)

In Chemistry:

- 101-102 General Chemistry (5-5)

In Mathematics:

- 102 College Algebra (4)
- 103 Algebra and Trigonometry (4)
- 206 Calculus I (4)

Students who plan to pursue graduate study in geology are advised to take calculus; others may substitute a 4- or 5-unit course in statistics with approval of adviser.

In Physics:

- 101-103 Physics (4-4-4)

Upper Division

Required in Geology (45 units):

- 356 Geology Colloquium II (1-1-1)
- 360 Geological Mapping (3)
- 370 Geochemistry (4)
- 401 Igneous and Metamorphic Petrology (5)
- 402 Sedimentary Petrology (4)
- 410 Structural Geology (5)
- 430 Stratigraphy (4)
- 431 Invertebrate Paleontology (5)
- 460A Summer Field Geology I (4)
- 460B Report for Field Geology I (2)
- 461A Summer Field Geology II (4)
- 461B Report for Field Geology II (2)

Students who do not plan to enter professional geology work may substitute up to 12 units of electives in geology or related fields, with approval of adviser for Geology 460AB and 461AB.

Electives in Geology (8 units):

Select with approval of adviser.

Minor in Geology

This program is designed for students majoring in other fields who wish to broaden their experience in science or prepare for careers such as teaching, public service, or law. The minor requires 30 units in geology and related fields, of which 15 units are in lower division and 15 are in upper division courses. Consultation with a department adviser is recommended. Students with majors in related physical sciences may substitute other courses, with approval of Geology adviser.

Lower Division

Required in Geology (15 units):

- 150 Physical Geology (4)

- 152 Historical Geology (4)

- 155 Oceanography (4)

- 201 Mineralogy and Crystallography I (3)

Upper Division

Required in Geology (3 units):

- 360 Geological Mapping (3)

Electives in Geology (12 units):

Select with approval of adviser; Geography 402 may be included.

The Credential Program

An undergraduate program in Geology is currently under preparation for examination waiver for the single subject credential in Physical Science. Students should consult advisers in the department and in the School of Education.

Courses of Instruction

Lower Division Courses

150 Physical Geology (4)

Elementary study of the earth, materials and structure, physical and chemical processes at work upon and within it; laboratory includes study of minerals, rocks, topographic and geologic maps, geologic structures, seismograms, and other geologic phenomena. Optional field trips. Lecture 3 hours, laboratory 3 hours.

151 Physical Geology Laboratory (2)

Prerequisite: Any physical geology course, or may be taken concurrently with Geology 150, 155, 422, or Geography 160. Field interpretation of rocks, minerals, and geologic structures of Southwestern United States; field trips scheduled for weekends or quarter intersessions. Proseminar 1 hour, field trips 3 hours. May be repeated once for credit if different areas are studied.

152 Historical Geology (4)

Prerequisites: Geology 150 or 155 and 157, or 422 and 157. Evolution of continents, oceans, mountain systems and geologic history of the earth; development and distribution of ancient plant and animal life. Lecture 3 hours, laboratory 3 hours.

155 Oceanography (4)

Marine geology and oceanography. Physicochemical processes and geological features of oceans; role of oceans in earth history; interactions of oceans, biosphere, and atmosphere; and natural resource potential.

157 Physical Geology Laboratory (1)

Prerequisite: Any non-laboratory geology course. Earth materials (minerals and rocks), interpretation of geologic features (especially of California) on maps and cross-sections, examination of earthquake problems. Not open to students taking Geology 150 or equivalent.

201 Mineralogy and Crystallography I (3)

Prerequisite: Chemistry 101. Nature of crystalline state, description of crystals and projection, general study of seven crystal systems and the thirty-two crystal classes using mineral examples. Lecture 2 hours, laboratory 3 hours.

202 Mineralogy and Crystallography II (3)

Prerequisite: Geology 201. Physics and chemistry of minerals, classification and structure of silicates; genesis, associations, and physical properties of common minerals. Lecture 1 hour, laboratory 6 hours.

256 Geology Colloquium I (1)

Prerequisite: At least one course in physical geology, oceanography, or earth science, or consent of instructor. Lecture and seminar series on current research and development in general geology, geophysics, geochemistry, environmental geology, oceanography. May be repeated twice for credit.

*Upper Division Courses***356 Geology Colloquium II (1)**

Prerequisite: Geology 256 or consent of instructor. Lecture and seminar series on current research and development in general geology, geophysics, geochemistry, environmental geology, oceanography. Critical reading and discussion of papers by speakers and other authors. May be repeated twice for credit.

360 Geological Mapping (3)

Prerequisite: Geology 152. Elementary geologic mapping. Brunton and tape construction of geologic cross-sections from traverse data, plane table mapping; triangulation with transit, introduction to field classification of rocks and field recognition of geologic features such as faults, folds, and intrusive contacts. Laboratory and field trips 9 hours.

370 Geochemistry (4)

Prerequisite: Geology 202 or Physics 206. Interpretation of geological phase diagrams, trace element distribution, isotope tracers, radiometric dating systems, light stable isotopes, aqueous solution in ore deposits, Eh-PH controls on mineral equilibrium during weathering and diagnosis.

401 Igneous and Metamorphic Petrology (5)

Prerequisites: Geology 370, Chemistry 102, and Mathematics 206 (may be taken concurrently). Origin, occurrence, and classification of igneous and metamorphic rocks; laboratory emphasis on hand lens identification and petrochemical calculations. Lecture 3 hours, laboratory 6 hours.

402 Sedimentary Petrology (4)

Prerequisite: Geology 370 or consent of instructor. Analysis of sediments and sedimentary rocks involving their description, classification, and origin. Principles of sedimentation, recognition of environments of deposition. Lecture 2 hours, laboratory and field trips 6 hours.

410 Structural Geology (5)

Prerequisites: Geology 202, 360 and Mathematics 206. Theory of rock deformation, structural features of sedimentary, igneous and metamorphic rocks; deformation of the earth's crust, applied practice in laboratory methods dealing with geologic problems in three dimensions. Lecture 3 hours, laboratory 6 hours.

411 Economic Geology of Non-metallic Deposits (4)

Prerequisites: Geology 360 and Chemistry 101. Sedimentary geochemical cycles and economic aspects of sedimentary deposits and utilization of common rock materials. Lecture 3 hours, laboratory and/or field trips 3 hours.

412 Economic Geology of Metallic Deposits (4)

Prerequisites: Geology 360 and Chemistry 101. Geochemistry of ore formation, occurrence and distribution of metallic deposits, laboratory examination of ore suites. Lecture 3 hours, laboratory and/or field trips 3 hours.

421 Geology of California (4)

Prerequisite: Geology 150 (laboratory course). Systematic study of the geology of California.

422 Environmental Geology (4)

Problems of environment from standpoint of man's interaction with geologic hazards, geologic processes, mineral and petroleum exploitation and water resources. Two field trips required.

430 Stratigraphy (4)

Prerequisite: Geology 402 or consent of instructor. Paleogeography and reconstruction of ancient environments of sedimentary basins, through application of structural, petrologic, stratigraphic, and paleontologic principles. Stratigraphic analysis of economic deposits. Lecture 3 hours, laboratory and field trips 3 hours.

431 Invertebrate Paleontology (5)

Prerequisite: Geology 152. Characteristics and evolution of important fossils in invertebrate animals and fundamentals of stratigraphical paleontology. Lecture 3 hours, laboratory 6 hours.

441 Optical Mineralogy (5)

Prerequisite: Geology 202 or Physics 204. Optical properties of crystals in polarized light, determination of minerals in thin sections and immersion oils with the petrographic microscope. Lecture 2 hours, laboratory 9 hours.

442 Petrography (4)

Prerequisites: Geology 401 and 441. Use of petrographic microscope in identifying and classifying rocks and in determining the origin and geologic history of rocks and rock masses. Study of rock suites from selected localities. Lecture 2 hours, laboratory 6 hours.

460A Summer Field Geology I (4)

Prerequisites: Geology 360, 402 and 410; concurrent enrollment in Geology 460B. First five weeks of quarter; four weeks in a field camp considerable distance from campus, investigating area of sedimentary rocks, fifth week on campus preparing report.

460B Report for Field Geology I (2)

Prerequisite: Must be taken concurrently with Geology 460A. Preparation of geologic map, cross sections and report on entire area covered by class in Geology 460A.

461A Summer Field Geology II (4)

Prerequisites: Geology 360, 401 and 410; concurrent enrollment in 461B. Second five weeks of quarter; four weeks in area of igneous and metamorphic rocks; fifth week on campus preparing report.

461B Report for Field Geology II (2)

Prerequisite: Must be taken concurrently with Geology 461A. Preparation of geologic map, cross sections and report on entire area covered by class in Geology 461A.

470 X-Ray Crystallography (4)

Prerequisite: Chemistry 401 or Geology 202 or Physics 206, or consent of instructor. Analysis of crystal structure and chemistry by x-ray powder diffraction methods; laboratory problems applicable to mineralogy, petrology, metallurgy and inorganic chemistry; introduction to single crystal methods. Lecture 2 hours, laboratory 6 hours.

471 Analytical Geochemistry (4)

Prerequisite: Chemistry 201 or Geology 401 or Physics 206, or consent of instructor. Intended for upper division students in chemistry, geology or physics interested in quantitative x-ray fluorescence spectrographic analysis of rocks and minerals. Laboratory problems include evaluation of samples collected from mapped areas and statistical summary of results. Lecture 2 hours, laboratory 6 hours.

480 Principles of Geophysics (4)

Prerequisites: Physics 203 or 103, and Mathematics 207; Geology 150 recommended. Internal physics of the earth, interpretation of data and theories concerning the geodetic, tectonic, isostatic, thermal, seismic, gravity, magnetic, radioactive, and electrical phenomena of the earth.

481 Engineering Geology (4)

Prerequisite: Geology 461. Analysis of geologic factors affecting engineering projects; includes mechanical

properties of rocks and soils, landslides, slope stability, subsidence, groundwater, erosion and silting, earthquake effects.

483 Photogeology (4)

Prerequisite: Geology 360. Use of aerial photographs to interpret geological structures and lithologies shown on topographic maps; analysis of photos for engineering projects.

490 Special Topics in Modern Geology (2-4)

Prerequisite: Upper division or graduate standing or consent of instructor; other prerequisites may be stated in departmental announcement. Current developments in modern geology, such as volcanology, hydrogeology, clay mineralogy, or plate tectonics. May be repeated as subject matter changes.

491 Special Laboratory Topics in Modern Geology (1-3)

Prerequisite: Concurrent enrollment in Geology 490 when appropriate; see *Schedule of Classes* for specific requirement. Experimental techniques in modern geology. May be repeated as subject matter changes.

497 Senior Problem (3)

Prerequisites: Senior standing in Geology and prior consent of instructor to act as sponsor. Individual study of an applied geologic field or laboratory problem; progress reports, final oral and written report required.

499 Undergraduate Directed Study (1-3)

Prerequisite: Consent of an instructor to act as sponsor, ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

Health and Safety Studies

In School of Fine and Applied Arts

The curriculum in Health and Safety Studies provides both Bachelor of Arts and Master of Arts degree programs which prepare students for professional service in the health sciences and safety studies fields. The M.A. program is described in the *Graduate Programs* section.

The Faculty

Professors: Saxon C. Elliot, Ben C. Gmur, Barbara Osborn Henkel, David L. Jacobsohn, John LeValley, Charles E. Robinson, Ben F. Scherer (Chairperson), William E. R. Whiteley.

Associate Professors: William M. Cole, Robert L. Fennessy, Edward Maljanian, Blythe Sprott.

The Undergraduate Program

The Bachelor of Arts degree in Health and Safety Studies prepares students for teaching and supervisory positions in various health and safety related occupations and professions, including industrial safety and community health and educational services.

Requirements for the Major

The major in Health and Safety Studies consists of 114–117 units, including 52–53 units of lower division courses. The upper division requirements consist of a 22-unit core program, 21 units of electives, and a choice of two options, requiring 19–21 units. The options are: (1) School Health and Safety Studies, and (2) Community Health Education and Services.

Students seeking this major are required to complete Biology 200AB before enrolling in upper division Health and Safety Studies courses.

Lower Division

Required Courses (53–54 units):

In Health and Safety Studies:

201 Management of Medical Emergencies (2)

In Biology:

200AB Human Anatomy and Physiology (5-5)

In Political Science:

150 Government and American Society (4)

In Psychology:

150 Human Behavior (4)

In Sociology:

201 Introductory Sociology (4)

202 Social Problems and Institutions (4)

In Sciences and Mathematics:

RECOMMENDED SEQUENCE

In Biology:

151 Principles of Population Biology (4)

152 Animal Life (4)

In Microbiology:

150 Principles of Microbiology (4)

In Chemistry:

151 Fundamentals of Chemistry I (5)

Select two from following:

In Chemistry:

152 Fundamentals of Chemistry II (5)

In Mathematics:

102 College Algebra (4)

In Physics:

150 Principles of Physics (4)

ALTERNATE SEQUENCE

Students may substitute for above sequence in science and mathematics a minimum of 25 units selected from the following courses, with approval of adviser.

In Biology:

101 Biology of Animals (5)

102 Biology of Plants (5)

or

151 Principles of Population Biology (4)

152 Animal Life (4)

In Microbiology:

150 Principles of Microbiology (4)

In Mathematics:

101 Intermediate Algebra (4)

102 College Algebra (4)

103 Algebra and Trigonometry (4)

353 Finite Mathematics with Applications to Behavioral Sciences (4)

In Chemistry:

151–53 Fundamentals of Chemistry I–III (5-5-5)

In Physics:

150 Principles of Physics (4)

or

101–03 Physics (4-4-4)

Upper Division

Required Core in Health and Safety Studies (22 units):

350 Health Maintenance Problems (3)

360 Selecting Health and Medical Services and Products (3)

401 Medical Emergency Studies (3)

444 Health and Safety Law (4)

467 Alcoholism and Drinking Problems in Health and Safety (3)

- 468 Narcotic and Dangerous Drug Problems in Health and Safety (3)
- 475 Accident and Safety Studies (3)

Electives in Health and Safety Studies (21 units):

Select from following, with approval of adviser:

- 398 Cooperative Education (1-4)
- For students without prior professional work experience*
- 422 Radiation Hazards in Health and Safety (2)
- 423 Radiological Health (2)
- 455 Sex Information for Health Education (3)
- 456 Health Studies on Dangerous Drugs and Narcotics, Alcohol, and Tobacco (4)
- 460 School Health Studies (2)
- 461 School Health Services (2)
- 462 Chronic and Degenerative Disorders (3)
- 463 Community and Environmental Health Problems (2)
- 464 Community Health Agencies (2)
- 473 Driver Training Programs (2)
- 474 Driver Education Curriculum (2)
- 477 Traffic Simulator Instruction (2)
- 479 Organization and Supervision of Safety and Driver Instruction (2)
- 490 Administration of School Health Programs (3)
- 491 Special Studies in Health and Safety (1-4)
- 499 Undergraduate Directed Study (1-3)

Options (19–21 units):

Select one of the following options.

Option I: School Health and Safety Studies

Select from following, with approval of adviser. Courses in School of Education are not applicable to credential requirements.

In Criminal Justice:

- 236 Traffic Control and Regulation (4)

In Home Economics:

- 120 Marriage and Family Relationships (4)
- 211 Fundamentals of Human Nutrition (3)

or

- 250 Human Nutrition (3)

In Industrial Studies:

- 100 Introduction to Automotive Mechanisms (3)
- 101 Industrial Safety for Industrial Education (3)
- 201 Automotive Electrical System (3)
- 301 Fuel and Ignition Systems (3)
- 402 Power Transmission Systems (3)

In Physical Education:

- 400A Kinesiology (4)
- 400B Physiology of Activity (4)

In Psychology:

- 326 Psychological Factors in Marriage (4)

In Recreation:

- 471 Recreation for Handicapped (3)

In Secondary Education:

- 451 Instructional Media Techniques (4)
- 453 Instructional Technology and Programmed Instruction (4)

In Sociology:

- 425 Medical Sociology (4)
- 440 Marriage and Family (4)
- 478 Social Legislation (4)
- 482 Juvenile Delinquency (4)

In Special Education:

- 420 Implications of Communications Handicaps (4)

- 465 Introduction to Vision (3)
- 469 Psychological, Sociological, and Vocational Implications of Blindness (3)

Option II: Community Health Education and Services

Select from following, with approval of adviser:

In Educational Foundations:

- 437 Education and Intergroup Relations (4)

In Educational Guidance:

- 460 Laws Relating to Children and Child Welfare (4)

In English:

- 306 Technical Report Writing (4)

In Geography:

- 476 Geography of Urban Areas (4)

In Home Economics:

- 250 Human Nutrition (3)

In Political Science:

- 404 Urban Government and Politics (4)
- 460 Foundations of Public Administration (4)
- 470 Public Relations in Government (4)

In Psychology:

- 218 Psychology of Adjustive Behavior (3)
- 410AB Abnormal Psychology (4-4)

In Secondary Education:

- 451 Instructional Media Techniques (4)
- 476 Curriculum Construction for Adult Classes (3)

In Sociology:

- 424 Mass Communications and Public Opinion (4)
- 425 Medical Sociology (4)
- 426 Deviant Behavior (4)
- 430 Urban Sociology (4)
- 440 Marriage and Family (4)
- 472 Community Organization (4)
- 478 Social Legislation (4)
- 482 Juvenile Delinquency (4)

In Speech Communication:

- 478 Group Communications: Dynamics of Leadership and Participation (4)

Minor in Health and Safety Studies

A total of 40–42 units is required for the minor in Health and Safety Studies. This program provides preparation toward certification to teach in the areas of adult education, civil defense, driver education, medical self-help, and Red Cross instruction.

Lower Division

Required Courses (12 units):

In Biology:

- 200AB Human Anatomy and Physiology (5-5)

In Health and Safety:

- 201 Management of Medical Emergencies (2)

Upper Division

Required in Health and Safety (13 units):

- 444 Health and Safety Law (4)
- 460 School Health Studies (2)
- 461 School Health Services (2)
- 463 Community and Environmental Health Problems (2)

475 Accident and Safety Studies (3)

Electives in Health and Safety Studies (15–17 units):
Select courses with approval of adviser.

The Credential Program

A Health Science Instruction Specialist credential has been approved under new state legislation which governs the credentialing of teachers. A program for this credential is being developed for approval by the Commission for Teacher Preparation and Licensing. In addition, the Commission is developing guidelines for a teaching credential in Public Safety and Accident Prevention, including Driver Education and Driver Training. Students should consult advisers in the Department of Health and Safety Studies regarding the progress of these programs.

Courses of Instruction

Lower Division Courses

150 Basic Health and Safety Studies (3)

Current health problems facing young adults. Emphasis on utilizing scientific methods to solve personal health problems and making application of findings from research to daily living.

201 Management of Medical Emergencies (2)

Prepares students to give immediate and temporary treatment in emergency situations; includes first aid and personal safety, legal and safety aspects of medical aid. Qualifies for Red Cross certification.

Upper Division Courses

Upper division standing is prerequisite to enrollment in all 300- and 400-level courses.

Biology 200AB is also prerequisite for students majoring in Health and Safety Studies.

301 Cardiopulmonary Resuscitation and Basic Life Support Systems (1)

Prerequisite: Health and Safety 201 or consent of instructor. Principles and techniques of cardiopulmonary resuscitation in emergency care. American Red Cross CPR certification.

350 Health Maintenance Problems (3)

Prerequisites: General Education requirements in biological sciences. Beneficial and detrimental factors of environment and their effect on the body and maintenance of health.

360 Selecting Health and Medical Services and Products (3)

Consumer health, evaluation of health and accident insurance, quackery and fraudulent health practices, food and drug controls.

398 Cooperative Education (1-4)

Prerequisites: Overall grade point average of 2.35, upper division standing in departmental major or minor, and approval by departmental coordinator prior to registration. Active employment, with regular meetings to dis-

cuss student's progress. May be repeated to maximum of 6 units. Graded CR/NC only.

401 Medical Emergency Studies (3)

Prerequisites: Health and Safety 201 or equivalent, and Biology 200AB. Includes instructor certification for first aid, and medical self-help. Practice instruction required.

422 Radiation Hazards in Health and Safety (2)

Prerequisites: Health and Safety 350, Physics 150, and Biology 200AB. Responsibilities of schools and public agencies for programs of education, protection, and training.

423 Radiological Health (2)

Prerequisite: Health and Safety 422. Radiation exposure problems; radiation and radiant effects, including fallout; critical analysis of current information. Fulfills requirements for State of California Instructor Certificate for Personal Survival Training.

444 Health and Safety Law (4)

Prerequisites: General Education requirements in biological and social sciences, and health. Study, analysis, and application of federal, state, county, and city codes and ordinances relating to health science and safety programs.

455 Sex Information for Health Education (3)

Advanced sex information and education, physiological individuality and response, contraceptives and their health effects, selection and application of content in teaching sex education.

456 Health Studies on Dangerous Drugs and Narcotics, Alcohol, and Tobacco (4)

Analysis and evaluation of scientific data on effects of tobacco, alcohol, narcotics, and dangerous drugs. Current problems relating to control of use and abuse of these products. Fulfills teacher certification requirement in California.

460 School Health Studies (2)

Prerequisites: Health and Safety 201 and 350 or equivalent. Responsibility of classroom teacher in instructing in health content areas commonly taught in elementary and secondary schools.

461 School Health Services (2)

Prerequisites: Health and Safety 201, 350, and Biology 200AB. Responsibilities of classroom teacher in providing school health services and maintaining a healthful school environment.

462 Chronic and Degenerative Disorders (3)

Prerequisites: Health and Safety 350 and Biology 200 AB. Etiology and prognosis of degenerating tissue and their effects on health; new developments and research.

463 Community and Environmental Health Problems (2)

Prerequisite: Health and Safety 350 or equivalent. Review of historical and modern efforts to solve health problems; survey of health problems on local, state, national, and international levels.

464 Community Health Agencies (2)

Prerequisite: Health and Safety 350 or equivalent. Types of community structures and agencies organized to meet health needs of the community. Lecture 1 hour, field work 3 hours.

467 Alcoholism and Drinking Problems in Health and Safety (3)

Prerequisites: General Education requirements in health and biological sciences. Multidisciplinary study of problems of alcohol and alcoholism in society.

468 Narcotic and Dangerous Drug Problems in Health and Safety (3)

Prerequisites: General Education requirements in health and biological sciences. Concepts of drug addiction; problems in education, prevention and treatment.

473 Driver Training Programs (2)

Prerequisites: Health and Safety Studies 477 (may be taken concurrently), California driver's license, and prior approval of department. Study and utilization of dual-control vehicles for use in driver training programs.

474 Driver Education Curriculum (2)

Prerequisites: California driver's license and prior approval of department. Teacher preparation for driver education programs. Field experiences required.

475 Accident and Safety Studies (3)

Accident causes and analysis; education for safe living.

477 Traffic Simulator Instruction (2)

Prerequisite: Prior approval of department. Study and utilization of traffic simulators for use in driver training programs.

479 Organization and Supervision of Safety and Driver Instruction (2)

Prerequisite: Health and Safety 474. Analysis of programs, supervision problems, evaluation requirements, financial and personnel responsibilities, and program organization.

490 Administration of School Health Programs (3)

Prerequisite: Health and Safety 460. Principles and practices of supervision and administration in school health programs.

491 Special Studies in Health and Safety (1-4)

Prerequisite: Senior or graduate standing. Intensive study of an area of health or safety; area of special study announced in *Schedule of Classes*. May be repeated to maximum of 9 units as subject matter changes.

499 Undergraduate Directed Study (1-4)

Prerequisites: For health studies, Biology 200AB; for both health and safety studies, consent of instructor to act as sponsor. Project selected in conference with sponsor before registration, progress meetings held regularly, and a final report submitted. May be repeated to maximum of 6 units.

History

In School of Letters and Science

The Department of History offers the Bachelor of Arts and Master of Arts degrees in History and a minor in History. The undergraduate programs are described below and the graduate program is described in the *Graduate Programs* section.

The Department also participates in the interdisciplinary Bachelor of Arts degree program in Social Science, for which a concentration in History may be taken. This program is described under Social Science.

In addition to a broad curriculum in local, national, and world history, the department offers a wide variety of special topics courses. The program thus contributes to attainment of intellectual and cultural objectives in a liberal education appropriate to careers in law, journalism, business, government service, librarianship, teaching, and advanced study.

The Faculty

Professors: Butrus Abd al-Malik, John M. Allswang, Hugh S. Bonar, Jr., Richard Dean Burns, Seymour L. Chapin, Daniel Crecelius, Louis C. DeArmond, Donald O. Dewey, Eugene R. Fingerhut, Edward O. Guerrant, David Lindsey, Milton W. Meyer, Earl H. Phillips, Kenneth J. Pratt, Arthur Lee Smith, Kent L. Steckmesser, John L. Tipple.

Associate Professors: Stanley M. Burstein, Timothy Fox Harding, Udo Heyn, Samuel H. Jones, Walter D. Nelson, Vicente F. R. Pilapil, Neil Rabitoy (Chairperson).

Assistant Professors: Arnold Pincus, Martin J. Schiesl, John Zimmerman.

The Undergraduate Program

The Bachelor of Arts degree program is designed to provide an understanding of societal development in all aspects of experience and environment, and of the relevance of the past to the present condition. The program permits pursuit of a wide range of interests within the purview of historical methodology. The program is available in two options: the General Option and the Option for the Single Subject Credential in Social Science. The first is designed for students who may wish to prepare for advanced study and research or for the single subject credential in History; the second option is designed to prepare students for a teaching credential in the social sciences. Students should confer in advance with a History adviser to select the courses and programs appropriate to their goals.

Requirements for the Major

Required for both options in the Bachelor of Arts program is the completion of a core requirement consisting of 12 units of lower division History courses. The General Option requires a total of 68 units of which 20 are in lower division and 48 are in upper division. The Option for the Single Subject Credential in Social Science requires a total of 72–76 units of which 20 are in lower division History courses and 52–56 are in lower and upper division courses in History and related fields.

Foreign Language Competence

History majors are urged to develop competence in at least one foreign language.

Core Requirements

Lower Division

Required in History (12 units):

Select two from following:

101ABC Western Civilization (4-4-4)

Select one from following:

102A African Civilization (4)

102B Middle Eastern Civilization (4)

102C South Asian Civilization (4)

102D East Asian Civilization (4)

102E Latin American Civilization (4)

General Option

Lower Division

Required in History (8 units):

190 Introduction to History (4)

202A United States Civilization (4)

or

202B United States Civilization (4)

Upper Division

Required in History (32 units):

450 Special Studies in History (4)

493 Historiography (4)

Select 8 units from Groups A, B, and C for total of 24 units.

Group A

History of Science: 400ABC, 402

Ancient: 410-413

Europe (Chronological): 421-429

Europe (Topical): 431-447

Group B

United States (Chronological): 470-475

United States (Topical): 476-489

Group C

Africa: 414AB-416

Middle East: 419, 420, 491, 492

Asia: 490AB, 494AB, 495AB, 496

Latin America: 461-466

NOTE: Students seeking a single subject credential in History are advised to select both courses from a single area in Group C.

Electives in History or Related Fields (16 units):

Select 400-level courses in History; 450, 451, and 499 may be included. With prior approval of adviser, a maximum of 8 units may be taken in fields outside History.

NOTE: Students seeking a single subject credential in History are advised to include History 488.

Option for Single Subject Credential in Social Science

Lower Division

Required in History (8 units):

202AB United States Civilization (4-4)

Upper Division

Required in History (12 units):

Select one course from each of Groups A, B, and C listed above in the General Option.

Electives in History (12 units):

Select 400-level courses with approval of adviser.

Required in Related Fields (28-32 units):

Select *one* course from each of following areas:

Anthropology 250

or

Sociology 250

Geography 150, 160

Political Science 150

Select *one* course from each of following groups:

Economics 301, 302, 303, 310, 350, 390, 410, 412, 420, 425, 433, 435, 440, 445, 460, 480, 490

Geography 370, 421, 423, 424, 425, 427, 428, 430, 431, 441, 475, 476, 477, 478, 481

Political Science: Select one course other than 460-476 or 496.

Other Social Sciences:

Anthropology: Any 400-level course up to and including 462.

Psychology: 308, 326, 401, 406, 408, 410AB, 412AB, 416, 418AB, 420, 422, 423, 424AB, 425, 431

Sociology: 412, 414, 415, 420, 424, 425, 426, 430, 434, 440, 441, 442, 444-448, 476, 478, 480, 482, 484, 486

Minor in History

The minor in History is available for students majoring in other fields. The 32-unit program includes a sequence of courses with the same general objectives as the History major and may

be of particular value for students with majors in business, engineering, the sciences, and fine or applied arts.

Lower Division

Required in History (16 units):

101C Western Civilization (4)

202AB United States Civilization (4-4)

Select *one* from following:

102A African Civilization (4)

102B Middle Eastern Civilization (4)

102C South Asian Civilization (4)

102D East Asian Civilization (4)

102E Latin American Civilization (4)

Upper Division

Required in History (12 units):

Select *one* course from each of the following groups:

Group A

History of Science: 400ABC, 402

Ancient: 410-413

Europe (Chronological): 421-429

Europe (Topical): 431-447

Group B

United States (Chronological): 470-475

United States (Topical): 476-489

Group C

Africa: 414AB-416

Middle East: 419, 420, 491, 492

Asia: 490AB, 494AB, 495AB, 496

Latin America: 461-466

Elective (4 units):

Select any 400-level course in History.

The Credential Program

The Bachelor of Arts degree programs in History are being submitted for approval to the Commission for Teacher preparation and Licensing for examination waiver for the single subject credentials in History and in Social Science. Students should consult advisers in the department and in the School of Education.

Courses of Instruction

Lower Division Courses**101A Western Civilization (4)**

Western man to the Renaissance, with emphasis upon growth and development of those ideas and institutions that formed basis of European civilization.

101B Western Civilization (4)

European civilization from the Renaissance to the French Revolution.

101C Western Civilization (4)

European history in the nineteenth and twentieth centuries.

102A African Civilization (4)

Historical development of traditional civilization in Africa south of the Sahara, to mid-nineteenth century.

102B Middle Eastern Civilization (4)

Historical examination of Middle Eastern civilization; emphasis on developments since 600 A.D.

102C South Asian Civilization (4)

Nature and development of traditional South and Southeast Asian civilization prior to the Western impact.

102D East Asian Civilization (4)

Nature and development of traditional Chinese, Korean, and Japanese civilizations prior to the Western impact.

102E Latin American Civilization (4)

Introduction to past and present Latin American civilization, including political, social, economic, and cultural change.

150 Asian-American History (4)

Asian experience in America from 1850 to present. Emphasis on historical experience of Chinese, Japanese, Filipino, Korean immigrant groups.

190 Introduction to History (4)

Development of historical writing, and practical experience in investigating historical questions.

202A United States Civilization (4)

Development of United States from earliest colonial settlement through Civil War.

202B United States Civilization (4)

Political, economic, social, cultural development of United States from Civil War to present.

*Upper Division Courses***400A History of Science: Antiquity to Renaissance (4)**

Examination of development of science in its relation to main current of Western civilization from classical antiquity to the Renaissance.

400B History of Science: Renaissance to 1800 (4)

Examination of development of science in its relation to the main currents of Western civilization from about 1400 to time of the French Revolution.

400C History of Science: 19th and 20th Centuries (4)

Examination of development of science in its relation to the main currents of Western civilization since 1800.

402 History of Astronomy (4)

Emergence and development of astronomical concepts and problems from earliest time to present.

410 Ancient Near East: 4000–323 B.C. (4)

Extensive study of earliest civilizations—Egyptian, Mesopotamian, Syrian, Persian, and Hebrew—and their historical legacy to Western world.

411 History of the Hellenic World (4)

Political and cultural study of Hellenic World from Minoan-Mycenaean period to end of fifth century.

412 History of Rome (4)

Development of Rome from earliest times, rise and fall of Roman Republic, the Empire to 476 A.D.

413 Greek History: The Alexandrian Age (4)

Political, social, and religious developments from conquest of Alexander to rule of Islam; a history of Hellenistic, Roman, and early Byzantine rule in Near East.

414A Traditional Sub-Saharan Africa (4)

African continent south of the Sahara, earliest times to latter half of eighteenth century, with emphasis on political development.

414B Modern Sub-Saharan Africa (4)

Partition of Africa in nineteenth century, systems of European administration, reaction to colonial rule, birth of nationalism; social, economic, and political changes to 1945.

415 Contemporary Sub-Saharan Africa (4)

Post-World War II independence revolutions in black Africa; resistance to change in southern Africa; contemporary political, social, and economic problems of Africa south of the Sahara.

416 The Republic of South Africa (4)

South Africa, seventeenth century to present, emphasizing economic growth, development of political and social attitudes, and entrenchment of white rule.

419 The Middle East: 600–1258 (4)

Rise of Islam, the Caliphate, the Crusades, the Turkish and Mongol invasions.

420 The Middle East: 1258 to 1798 (4)

Dissolution of Arab Empire; Mamluk rule in Egypt; Il-Khanit, Timurid and Safavid Persia; rise of Ottoman Turks and Ottoman Empire; Middle East culture and society on the eve of Westernization.

421 The Early Middle Ages (4)

Europe from fall of Roman Empire to thirteenth century; political, social, economic, and religious development of medieval Europe.

422 The Later Middle Ages (4)

Emergence of modern Europe and the period's cultural contributions to modern era.

423 Renaissance and Reformation (4)

Changes which shaped the course of early modern Europe up to 1600, with emphasis on nature of period's leading phenomena, the Renaissance and Reformation.

424 Seventeenth Century Europe (4)

Culmination of Wars of Religion, beginning of Age of Reason, and nature of absolutism in period from 1600 to 1715.

425 Eighteenth Century Europe (4)

History of Europe during Age of Enlightenment from Peace of Utrecht, 1713, to beginning of French Revolution, 1789.

426 French Revolution and Napoleon (4)

History of Europe during period of French Revolution and Napoleon.

427 Europe: 1815–1871 (4)

Forces of European reaction and revolution, and search for constitutional government and national unification.

428 Europe: 1871–1914 (4)

Forces of European nationalism, imperialism, and power politics.

429 Europe: 1914 to Present (4)

Europe from beginning of World War I to present.

431 History of Modern Germany (4)

History of modern Germany, with emphasis upon twentieth century.

437 Social History of Europe (4)

Individual and society in Europe, with particular emphasis on modern period.

438 Economic History of Europe (4)

Economic development of Europe, with particular emphasis on modern period.

439 Intellectual History of Europe (4)

Thought, belief and opinion in Europe, with particular emphasis on modern period.

440 Early Modern England (4)

History of England from fourteenth century to 1688, with emphasis upon constitutional, social, political and economic developments.

441 British History from 1688 to 1865 (4)

Historical development of Britain from Glorious Revolution to death of Palmerston.

442 Great Britain Since 1865 (4)

Historical development of Great Britain from 1865 to present.

443 The British Empire (4)

Political and economic development of British Empire since late eighteenth century, with major consideration to expansion of colonial empire and evolution of modern empire-commonwealth.

444A Spain and Portugal to 1700 (4)

Political and institutional development of Spain and Portugal from antiquity to War of Spanish Succession.

444B Spain and Portugal Since 1700 (4)

Political and institutional development of Spain and Portugal from 1700 to present.

445 Russia to 1801 (4)

Political, economic, social, and cultural history of Russia from earliest times to accession of Alexander I.

446 Russia: 1801–1917 (4)

History of Russia from accession of Alexander I to end of Romanov dynasty in 1917.

447 History of Soviet Union (4)

Background and history of revolutions of 1917 and subsequent historical development of Soviet Union.

450 Special Studies in History (2 or 4)

Different theme or episode in history examined thoroughly each quarter in the manner of an undergraduate seminar; individual readings, written and oral reports, and discussion. May be repeated for credit.

451 Special Lectures in History (2-4)

Lectures on special historical topics not regularly given by department. May be repeated for credit as topic changes.

461 Latin America: Colonial Period (4)

Pre-history of the Americas south of the United States; European background, period of conquest and colonial development to time of wars for independence.

462 Latin America: 1810–1914 (4)

Examination of struggle for independence and social, political and economic development of Latin American nations during nineteenth and early twentieth centuries.

463 Latin America: 1914 to Present (4)

Examination of social, political, and economic development of Latin American nations since beginning World War I.

465 Brazil (4)

Survey of Brazilian history from Portuguese occupation of eastern South America through colonial period, independent empire, and the republic to present time.

466 Mexico (4)

Development of Mexican people and nation since time of aborigines; social, political and economic development, with particular attention to more recent period.

470 The United States: 1607–1763 (4)

Imperial and local institutions of England's North American colonies from their European origins to French and Indian War.

471 The United States: 1763–1815 (4)

Development of American political, social, and economic institutions from 1763 to 1815.

472 The United States: 1815–1877 (4)

American sectionalism and other political, economic and cultural developments from 1815 to 1877.

474 The United States: 1877-1929 (4)

Rapid economic development of nation in post-Civil War period, acquisition of overseas territory, rise of Progressivism, World War I, and the 1920's.

475 The United States: 1929 to Present (4)

United States from 1929 to present.

476 Economic History of U.S. (4)

American economic development, industrialization, national legislation in industry and commerce.

477A Social and Intellectual History of U.S. to 1860 (4)

Analysis of important social and intellectual trends from early colonial days through 1850's.

477B Social and Intellectual History of U.S. 1860-1919 (4)

Analysis of important social and intellectual trends from mid-nineteenth century to end of World War I.

477C Social and Intellectual History of U.S. Since 1920 (4)

Analysis of important social and intellectual trends from the 1920's to present.

478 U.S. Diplomatic History: (4)

Foreign relations of United States with emphasis on twentieth century.

479 Constitutional History of U.S. (4)

United States Constitution and American constitutionalism from colonial times to present.

480 Ethnic Groups in American History (4)

Role of national, racial, and religious cultural groups in development of American history, their relationships to American society and with one another.

481 Westward Movement and West to 1850 (4)

Advance and characteristics of American frontier from colonial times to Compromise of 1850.

482 Westward Movement and West Since 1850 (4)

Advance and characteristics of American frontier from Compromise of 1850 to West of today.

483 Rise of Urban America (4)

Development of the American city from mid-nineteenth century to present. Examines process of urban growth, structure of urban institutions and consequences of industrialization.

484 Civil War and Reconstruction (4)

Forces that split the Union; slavery, war, and the position of Blacks; Reconstruction and its failures.

488 California (4)

Political, economic, and cultural history of California from Spanish times to present.

489 Los Angeles (4)

Development of Los Angeles and its metropolitan areas from pueblo times to present.

490A Traditional India (4)

Examination of Indian civilization from earliest times to 1757.

490B Modern India and Pakistan (4)

Rise of British power, its political, economic and social impact; reaction to British rule; rise of nationalism and reformist movements; social, political and economic development since 1947.

491 The Middle East: 1798-1919 (4)

Cultural and political impact of West, dissolution of Ottoman Empire, reformist movements and nationalism in Middle East, birth of modern state system.

492 The Contemporary Middle East (4)

Rise of modern independent states in Middle East; survey of political, social, and economic developments in Middle Eastern states, with particular emphasis on attempts to create stable democratic regimes.

493 Historiography (4)

Development of historical writing; examination of representative historians and various philosophies of history.

494A Traditional China (4)

Examination of Chinese civilization from earliest times to 1500.

494B Modern China (4)

Social, political, and economic development of mainland China from 1500 to present.

495A Traditional Japan (4)

Japanese civilization from earliest times through traditional eras until 1868.

495B Modern Japan (4)

Social, political, and economic development of Japan since 1868.

496 History of Southeast Asia (4)

History and civilization of Southeast Asia with emphasis on political, social, and economic developments since 1800.

499 Undergraduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Project selected in conference with the sponsor before registration; progress meetings held regularly, and a final report submitted. May be repeated for credit.

Home Economics

In School of Fine and Applied Arts

The Department of Home Economics offers programs at both undergraduate and graduate levels in consumer education, textiles and clothing, residential interiors and housing, family and child development, home economics education, community services, food and nutrition, and dietetics. A broad foundation in humanities, social and natural sciences is stressed.

The Master of Arts degree is described in the *Graduate Programs* section.

The Faculty

Professors: Winona N. Brooks, Audrey G. Giesecking, Jane S. Lewis, Margaret E. McWilliams (Chairperson), Maxine L. Miller, Roine H. Thorup.

Associate Professors: L. Kaye Crippen, Sumiye Onodera, Lois M. Rhinesperger, Pauline Schatz, Lily Shen.

Assistant Professors: Ann Bingham-Newman, Sally A. Doolan, Mary A. Kramer, Jean E. La Crosse, Nancy L. Tither, Patricia Wright.

Clinical Associates: Velma Alcorn, Tommie Callegari, Ruth Hilterman, Audrey Klein, Michi Okada, Felton Pidgeon, Marian Smith, Barbara Zachary.

Lecturers: Kathleen Bates, Virginia Cass Crowe.

The Undergraduate Program

Both Bachelor of Arts and Bachelor of Science degrees are offered in Home Economics. Students planning to teach should follow the Bachelor of Arts degree program with the credential option. Students choosing a program in Dietetics must fulfill requirements for the Bachelor of Science degree.

Bachelor of Arts Degree

The curriculum leading to the Bachelor of Arts degree in Home Economics with the General Option is designed for students preparing for professional careers in home economics, community service, consumer education, family development, food and nutrition, residential interiors, or textiles and clothing. This program also provides an appropriate foundation in home economics for persons who plan to enter graduate programs, or for those desiring a well-rounded preparation in home economics for personal reasons. The Bachelor of Arts degree in Home Economics with the Credential Option is intended for students wishing to pursue a career in education.

Requirements for the Major

The Bachelor of Arts degree with the General Option requires a total of 76 units of which 16 are in lower division and 60 are in upper division required and elective courses. The Bachelor of Arts degree with the Credential Option also re-

quires a total of 76 units, 23 in lower division and 53 in upper division courses. Both programs are based on completion of General Education support courses, as described under each option.

General Option

General Education Support Courses

Home Economics majors working toward the Bachelor of Arts degree are required to include those courses in the General Education program which provide fundamental study in support of their professional objectives. The General Education program must be planned with a major adviser; many General Education courses serve as prerequisites to courses in the major. The 4-unit introductory course in human behavior, Psychology 150, is required of all students. Other courses which may be specified, depending on the student's interests within home economics, include anthropology, art, biology, chemistry, economics, microbiology, and sociology.

Lower Division

Required in Home Economics (16 units):

Select from following:

- 101 Cultural Aspects of Clothing (2)
- 120 Marriage and Family Relationships (4)
- 201 Apparel Construction (3)
- 205 Introduction to Textiles (3)
- 210 Foods (4)
- 211 Fundamentals of Human Nutrition (3)
or
- 250 Human Nutrition (3)
- 220 The Child (4)

Upper Division*Required in Home Economics (12 units):*

Select three from following:

321 Urban Family: Contemporary Trends (4)

341 Home Management (4)

444 Consumer Issues (4)

471 Communication of Home Economics Concepts (4)

481 Contemporary Issues in Home Economics (4)

Electives (48 units):

Select 48 units in Home Economics and related fields with approval of adviser, in accordance with individual interests in Home Economics career areas. At least one course must be taken outside Home Economics.

Single Subject Credential Option**General Education Support Courses**

The following are required of all students seeking a Single Subject Credential with teaching authorization in Home Economics.

Chemistry 151-2 Fundamentals of Chemistry I, II (5-5)

Economics 150 Economics for the Citizen (4)

Psychology 150 Human Behavior (4)

Sociology 201 Introductory Sociology (4)

Lower Division*Required in Home Economics (23 units):*

101 Cultural Aspects of Clothing (2)

120 Marriage and Family Relationships (4)

201 Apparel Construction (3)

205 Introduction to Textiles (3)

210 Foods (4)

211 Fundamentals of Human Nutrition (3)

220 The Child (4)

Upper Division*Required in Home Economics (49 units):*

301 Fashion Design I (4)

or

305 Analysis of Textile Products (4)

310 Meal Management (4)

or

312 Cultural Foods of California (4)

311F Science of Food (1)

320 Child Development I (4)

or

421 Marriage and Family Dynamics (4)

421 Urban Family: Contemporary Trends (4)

or

471 Communication of Home Economics Concepts (4)

341 Home Management (4)

360 Residential Interiors (4)

430 Household Equipment

440 Family Finance (4)

441 Urban Family: Its Resources (4)

444 Consumer Issues (4)

460 Housing: Shelter and Environment (4)

or

443 Management Problems in Urban Housing (4)

491 Programs for Occupational Education in Home Economics (4)

Required in Ethnic Studies (4 units):

Select one from following:

In Chicano Studies:

410AB Psychology of the Chicano (4-4)

In Pan-African Studies:

400 Personal and Social Adjustment of Afro-Americans (4)

Bachelor of Science Degree: Option in Food and Nutrition

The Option in Food and Nutrition is designed to prepare students to enter a dietetic internship or traineeship approved by the American Dietetic Association. Completion of the internship or one-year traineeship fully qualifies graduates to assume positions as hospital dietitians in community, state, and service hospitals as well as dietitians in group feeding situations in educational, industrial and commercial institutions.

This curriculum provides appropriate undergraduate preparation for persons planning to enter graduate programs in food and nutrition.

An alternative program for the B.S. degree is the Coordinated Undergraduate Dietetics Program (CUDP), which is partly funded by the W.K. Kellogg Foundation and the Veteran's Administration. This program integrates clinical preparation into the four-year curriculum, as described on the following pages. Programs are planned with the help of an adviser, to include courses in related fields and in Home Economics. The total requirements for the degree is 198 quarter units.

Preparatory Courses

Home Economics majors working toward the Bachelor of Science degree are required to take 37-46 units of general prerequisite courses, of which 16-18 apply to the General Education requirements. The courses are as follows:

In Biology:

200AB Human Anatomy and Physiology (5-5)

In Chemistry:

151-53 Fundamentals of Chemistry I, II, III (5-5-5)

or

101-02 General Chemistry I, II (5-5)

and

208ABC Bio-Organic Chemistry I, II, III (4-4-4)

In Microbiology:

150 Principles of Microbiology (4)

or

200A General Microbiology (5)

In Psychology:

150 Human Behavior (4)

In Anthropology:

250 Cultural Anthropology (6)

*or**In Sociology:*

201 Introductory Sociology (4)

Requirements for the Major

The major requires 107–108 units, including 15 in lower division and 92–93 in upper division courses.

Lower Division

Required Courses (15 units):

In Home Economics:

- 120 Marriage and Family Relationships (4)
- 210 Foods (4)
- 211 Fundamentals of Human Nutrition (3)
- 220 The Child (4)

Upper Division

Required in Home Economics (12 units):

- 310 Meal Management (4)

or

- 312 Cultural Foods of California (4)
- 311F Science of Food and Nutrition (1)
- 341 Home Management (4)

or

- 444 Consumer Issues (4)
- 411 Evaluation of Current Nutrition Concepts (3)

Electives in Home Economics (40 units):

Select 24 units from following:

- 410 Experimental Foods (4)
 - 412 Advanced Foods (4)
 - 414AB Institutional Food Service (4-4)
 - 415AB Diet Therapy (2-3)
 - 416Nu Child Nutrition (4)
 - 417AB Advanced Nutrition I, II (3-3)
 - 430 Household Equipment (4)
 - 470 Demonstration Techniques (4)
 - 495 Field Work in Home Economics (2-4)
- Select additional 16 units in upper division Home Economics courses.

Required in Communication (4 units):

Select one from following:

In English:

- 306 Technical Report Writing (4)
- 406 Advanced Writing (4)

In Home Economics:

- 471 Communication of Home Economics Concepts (4)

In Journalism:

- 345 Magazine Article Writing (4)

Electives in Related Areas (36–37 units):

Select from following two areas, with minimum of 12 units from each.

HEALTH RELATED COURSES

Select 12–25 units from following, with approval of adviser and attention to prerequisites.

- Health and Safety Studies 350, 360, 462, 463
- Microbiology 200B, 301, 302
- Public Health 305, 310, 314, 401, 412, 413, 415
- Chemistry (appropriate sequence may be taken, if prerequisites are met.)

BEHAVIORAL SCIENCE COURSES

Select 12–24 units from following, with approval of adviser and attention to prerequisites.

- Anthropology 403, 433, 461, 480
- Educational Foundations 413 or Psychology 424A
- Chicano Studies 410AB, 450
- Pan-African Studies 400

Political Science 404

Psychology 406, 420, 422, 440, 442

Sociology 390, 424, 430, 442, 460, 472

Recommended Electives

Students needing additional courses to complete the 36–37 units of electives may select from the following recommended courses.

Home Economics 101, 201, 205, 320, 360, 440, 441, 460

Business 202 or 294, 307

Economics 150

Educational Foundations 452

Public Health 305

Physics 150

Coordinated Undergraduate Dietetics Program

The Coordinated Undergraduate Dietetics Program (CUDP) is coordinated with the Bachelor of Science in Home Economics, Option in Food and Nutrition. The four-year curriculum is designed to integrate academic preparation and clinical experience needed by the generalist in dietetics. Students completing the degree requirements in the CUDP are eligible for membership in the American Dietetic Association (ADA). Upon passing an examination administered by the ADA, graduates are qualified as Registered Dietitians.

Eligibility

Students seeking preliminary admission to the Coordinated Undergraduate Dietetics Program will be required to meet the following criteria:

- (1) Eligible for admission to California State University, Los Angeles.
- (2) Minimum overall grade point average of 2.6 (on a 4.0 scale).
- (3) Minimum grade point average of 2.6 in the major, with no grades lower than C in courses required for membership in the American Dietetic Association.
- (4) Satisfactory health for full participation in the clinical program. Physical examinations, including immunizations, are required as specified in contractual agreements with various clinical facilities.
- (5) Junior standing and completion of the first two years of the Bachelor of Science in Home Economics major. Students planning to pursue the program on a part-time basis will need to complete the major requirements in the B.S. in Home Economics prior to entering the professional component of the program.
- (6) Valid California driver's license and access to an automobile or transportation to clinical facilities.
- (7) Malpractice insurance for professional dietetics practice.

Final approval for admission to the intensive clinical work in the senior year (419ABC) is contingent upon the recommendation of the CUDP Review Board.

Preparatory Courses

Home Economics majors working toward the Bachelor of Science degree in the CUDP are required to take 45–54 units of general prerequisite courses, of which 24 units apply to the General Education requirements.

In Biology:

200AB Human Anatomy and Physiology (5-5)

In Chemistry:

151–53 Fundamentals of Chemistry I, II, III (5-5-5)

or

101–02 General Chemistry I, II (5-5)

and

208ABC Bio-Organic Chemistry I, II, III (4-4-4)

In Economics:

150 Economics for the Citizen (4)

In Microbiology:

150 Principles of Microbiology (4)

or

200A General Microbiology (5)

In Physics:

150 Principles of Physics (4)

In Psychology:

150 Human Behavior (4)

In Sociology or Anthropology:

201 Introductory Sociology (4)

or

250 Cultural Anthropology (6)

Requirements for the Major

A total of 111 units is required in this major, of which 30 are assigned to a senior-year of clinical experience.

Lower Division

Required Courses (19 units):

In Home Economics:

120 Marriage and Family Relationships (4)

210 Foods (4)

211 Fundamentals of Human Nutrition (3)

220 The Child (4)

In Business:

202 Survey of Accounting (4)

or

294 Business Computer Systems (4)

Upper Division

Required Courses (92 units):

In Home Economics:

310 Meal Management (4)

311F Science of Food and Nutrition (1)

315 Dynamics of Nutritional Care (3)

410 Experimental Foods (4)

411 Evaluation of Current Nutrition Concepts (3)

412 Advanced Foods (4)

414ABC Institutional Food Service (4-4-5)

415AB Diet Therapy (2-3)

416Nu Child Nutrition (4)

417AB Advanced Nutrition (3-3)

418 Community Nutrition (3)

419ABC Dietetics and Health Care Facilities (10-10-10)

479 Clinical Interactions in Dietetics (4)

341 Home Management (4)

or

430 Household Equipment (4)

In Psychology:

442 Industrial and Organizational Psychology (4)

Minor in Home Economics

A minor in Home Economics is available for students majoring in other fields. A total of 40 units is required, of which 17–21 are in lower division and 19–23 are in upper division courses.

Lower Division

Required in Home Economics (17–21 units):

120 Marriage and Family Relationships (4)

or

321 Urban Family: Contemporary Trends (4)

201 Apparel Construction (3)

205 Introduction to Textiles (3)

210 Foods (4)

211 Fundamentals of Human Nutrition (3)

or

250 Human Nutrition (3)

220 The Child (4)

Upper Division

Required in Home Economics (16–20 units):

321 Urban Family: Contemporary Trends (4)

Required of students who do not take Home Economics 120

310 Meal Management (4)

or

312 Cultural Foods of California (4)

341 Home Management (4)

360 Residential Interiors (4)

444 Consumer Issues (4)

or

481 Contemporary Issues in Home Economics (4)

The Credential Program

ADVISEMENT: FA 238, Ph. 224-3682.

The B.A. degree program in Home Economics with the credential option is intended for examination waiver for the single subject credential in Home Economics. Students should consult advisers in both the Department of Home Economics and in the School of Education.

Courses of Instruction

Lower Division Courses

101 Cultural Aspects of Clothing (2)

Physical, socioeconomic, psychological, and esthetic factors affecting consumer selection of clothing, including principles and elements of design related to clothing.

120 Marriage and Family Relationships (4)

Interpersonal relationships of family members and in-

teraction of the individual, the family, and the community; problems involved in courtship, marriage, and establishing the home.

201 Apparel Construction (3)

Clothing construction techniques, with emphasis on application of principles. May be repeated once, for elective credit only. Lecture-laboratory 6 hours.

205 Introduction to Textiles (3)

Fundamental study of fibers, yarns, fabrics, and finishes; selection, use, and care of textile materials. Lecture 2 hours, lecture-laboratory 2 hours.

210 Foods (4)

Principles and procedures of food preparation. Lecture 1 hour, laboratory 6 hours.

211 Fundamentals of Human Nutrition (3)

Prerequisite: Chemistry 152. Nutrition at various stages of life cycle, with emphasis on role of nutrients in the body.

220 The Child (4)

Growth processes and dynamics of development from conception through preschool years; emphasis upon understanding the child in the family; laboratory observations of child behavior.

221 Observation of Young Children (3)

Prerequisite: Home Economics 220. Methods of observation and use of basic theories of development in interpreting behavior of young children in group care settings. Observation sites arranged with instructor. Lecture 2 hours, activity 2 hours.

250 Human Nutrition (3)

Nutrition for individual throughout life cycle. Not available for credit for B.S. or teaching credential students in home economics, or majors in nursing or sciences.

260 Contemporary Interiors (4)

Survey and analysis of contemporary interiors. Selection and arrangement of furnishings and accessories.

Upper Division Courses

Upper division standing is prerequisite for enrollment in 400-level courses.

300 Professional Forum (2)

Prerequisite: Sixteen units in home economics or consent of instructor. Professional opportunities and career development in home economics.

301 Fashion Design I (4)

Prerequisite: Home Economics 201 and 205. Students majoring in other fields may elect with consent of instructor. Principles and techniques of pattern making, with emphasis on style development and fitting. Lecture-laboratory 8 hours.

305 Analysis of Textile Products (4)

Prerequisite: Home Economics 205. Performance, requisites of specific textile products; examination and

analysis of compatibility of components; fiber, yarn, fabric structure, finish, and product construction. Meets 8 hours weekly.

310 Meal Management (4)

Prerequisites: Home Economics 210 and 211 or 250. Consideration of effect of abilities, time, energy, and money on planning, preparation, and service of meals that are nutritionally adequate and esthetically satisfying. Lecture 1 hour, lecture-laboratory 6 hours.

311F,Nu Science of Food and Nutrition (1-1)

Prerequisites: Chemistry 152; for 311F, Home Economics 210; for 311Nu, Home Economics 250. Scientific principles of food preparation (311F) and human nutrition (311Nu).

312 Cultural Foods of California (4)

Prerequisite: Home Economics 210 or consent of instructor. Cultural food patterns represented in California; food choices, typical dishes, menus; nutritional aspects; purchasing; preparation techniques and equipment. Meets 8 hours weekly.

315 Dynamics of Nutritional Care (3)

Prerequisites: Admission to CUDP and junior standing; Home Economics 210 and 211; Psychology 150. Functional and socio-psychological aspects of nutritional care of hospital patient. Lecture 1 hour, clinical laboratory 6 hours; concurrent weekly professional colloquium required.

320 Child Development I (4)

Prerequisite: Home Economics 220; 221 recommended. Supervised observation-participation in a group care setting for young children; use of basic theories and observation techniques in practical situations and development of interaction-communication skills with young children. Lecture 3 hours, laboratory 3 hours.

321 Urban Family: Contemporary Trends (4)

Developmental processes and related problems of marital, parental, and family functioning in the urban setting.

341 Home Management (4)

Principles and techniques of effective home management; efficient use of time, energy, money, and material goods; decision-making and work simplification.

360 Residential Interiors (4)

Design, as applied in home furnishings and interiors; design concepts, objectives, principles and elements related to selection of interior materials and furnishings; cultural and psychological factors.

398 Cooperative Education (1-2)

Prerequisites: Overall grade point average of 2.35, upper division standing in departmental major or minor, and approval of departmental coordinator prior to registration. Active employment, with regular meetings to discuss student's progress. May be repeated to maximum of 6 units. Graded CR/NC only.

170 / HOME ECONOMICS

400 Tailoring (3)

Prerequisite: Home Economics 301. Principles and techniques used in tailoring of coats and suits. Lecture-laboratory 6 hours.

401 Fashion Design II (3)

Prerequisite: Home Economics 301 or consent of instructor. Precision draping; principles and techniques of creating design on the dress form. Lecture-laboratory 6 hours. May be repeated once for credit.

402 The Fashion Industry (4)

Analysis of fashion industry from textiles to retailing and consumerism.

405 Textile Study (3)

Prerequisites: Home Economics 205 and Chemistry 152. Physical testing of textile fabrics; fiber identification; new developments in fiber production, special finishes, yarn and fabric structure and properties. Lecture-laboratory 6 hours.

409 Historic Textiles (4)

Prerequisite: Home Economics 205 or consent of instructor. Historic textiles from earliest times to present; records and preserved textiles viewed as reflections of life and textile development of countries and major civilizations.

410 Experimental Foods (4)

Prerequisite: Home Economics 311F. Application of scientific principles to experimental methods in food preparation and recipe analysis. Lecture 2 hours, laboratory 6 hours.

411 Evaluation of Current Nutrition Concepts (3)

Prerequisite: Home Economics 211 or equivalent. Interpretation of nutrition research findings and consideration of possible applications for individuals and populations.

412 Advanced Foods (4)

Prerequisite: Home Economics 210. Scientific principles and procedures concerned with complex phases of food selection, preparation and preservation; includes recipe evaluation and study of regional and foreign foods. Lecture 2 hours, laboratory 6 hours.

414AB Institutional Food Service (4-4)

Prerequisites: Home Economics 210 and either 211 or 250; Microbiology 150. Experience in organization, management, and administration of institutional food services. 414A: Lecture 3 hours, laboratory 3 hours. 414B: Lecture 2 hours, laboratory 6 hours.

414C Institutional Food Service (5)

Prerequisites: Home Economics 414AB, Psychology 442. Principles of management for quality food service systems. Lecture 2 hours, laboratory 9 hours; concurrent weekly professional colloquium required.

415AB Diet Therapy (2-3)

Prerequisites: Home Economics 210 and 211, Biology 200AB, Chemistry 153, Microbiology 150; concurrent enrollment in Home Economics 417B for 415A. Application of principles of normal nutrition in effecting prognosis of a disease complex; psychological, sociological, and emotional factors influencing food acceptance during life cycle. 415A: Lecture 2 hours; 415B: Lecture 2 hours, laboratory 3 hours.

416Nu,CD Child Nutrition (4-4)

Prerequisites: Home Economics 211 and 220 for 416Nu (Home Economics majors); Home Economics 220 and 250 for 416CD (Child Development majors). Nutrition of children and consideration of concomitant problems.

417AB Advanced Nutrition I, II (3-3)

Prerequisites: Home Economics 211, Biology 200AB, Chemistry 153, and Microbiology 150. Scientific bases for nutritional needs of humans; factors involved in meeting such needs in individuals and population groups; metabolic factors in nutrition. 417A: Lecture 2 hours, laboratory 3 hours. 417B: Lecture 3 hours.

418 Community Nutrition (3)

Prerequisites: Home Economics 211 and 417B. Community nutrition problems, agencies and programs. Lecture 1 hour, field experience 6 hours.

419ABC Dietetics and Health Care Facilities (10-10-10)

Prerequisites: Senior standing; Home Economics 315, 410, 414ABC, 415B; admission to CUDP; grade of C or better in all prerequisites. Intensive learning experiences in dietary administration and nutritional care in hospital, public health facility, or other health care facility. Seminar 2 hours, field experience and/or clinical laboratory 24 hours weekly; concurrent weekly professional colloquium required.

420 Preadolescent in the Family (3)

Prerequisite: Home Economics 220 or consent of instructor. Family and child interaction during middle childhood and preadolescence.

421 Marriage and Family Dynamics (4)

Prerequisite: Home Economics 120 or equivalent or consent of instructor. Dynamic processes of constructive family interaction.

422 Nursery School Organization and Management (3)

Prerequisite: Home Economics 320 or consent of instructor. Role of nursery schools in meeting needs of young children and their families; organization, management, equipment and programs appropriate to developmental needs during preschool years. Field trips to preschool centers. Lecture 2 hours, laboratory 3 hours.

423 Parenting (4)

Prerequisite: Home Economics 220 or equivalent or consent of instructor. Aspects and problems of parenting from conception to adulthood.

424 The Formerly Married (4)

Prerequisite: Home Economics 120 or equivalent or consent of instructor. Life situations of the divorced and widowed, with or without children; effect on children.

425 Readings in Child Development (3)

Prerequisite: Home Economics 220 or consent of instructor. Selected readings relevant to analysis and integration of concepts of child development and family life.

426 Child Development II (4)

Prerequisites: Home Economics 220 and 221, and completion of Prescriptive Placement Test or Home Economics 320. Supervised observation-participation experience for advanced students in diversified settings; expansion of student's previous experiences with young children and further refinement of interaction-communication skills in working with children, parents, and staff.

430 Household Equipment (4)

Prerequisite: Physics 150 recommended. Fundamental considerations governing selection, operation, care and testing of equipment used in home. Lecture-laboratory 8 hours.

440 Family Finance (4)

Economic role of the family; factors affecting use of income, cost of goods and services; credit, savings and investments, income tax; sources of consumer aids and protection.

441 Urban Family, Its Resources (4)

Prerequisite: Appropriate course in sociology and economics. Focus on individual and family management of limited personal resources and use of community resources by low-income and otherwise disadvantaged families in urban environment.

443 Management Problems in Urban Housing (4)

Prerequisite: Home Economics 441 or consent of instructor. Urban housing and home environments for low-income housing; related housing laws and regulations; home operation, beautification, and sanitation.

444 Consumer Issues (4)

Prerequisites: Home Economics 341 and Economics 150, or consent of instructor. Factors influencing selection of goods and services for the family. Role, responsibility, and protection of consumer.

445 Management for Aged or Physically Handicapped (4)

Prerequisites: Psychology 150 and Special Education 460, or consent of instructor. Management of resources to meet functional needs of aged and/or physically handicapped. Emphasis on adaptation of family living situations, life styles, work processes, and equipment in home. Field trips included.

460 Housing: Shelter and Environment (4)

Relationship between housing and total environment; planning functional design suited to stages of family life cycle; construction methods and materials; recent de-

velopments relating shelter to urban and suburban community.

461 Home Furnishings Problems (4)

Prerequisite: Home Economics 360. Comparative study of products of industrial and custom drapery, upholstery, and wood finishing; materials, finishes and structure. Lecture 3 hours; lecture-laboratory 2 hours.

463 Problems in Residential Interiors (4)

Prerequisite: Home Economics 360 or equivalent or consent of instructor. Application of residential interior design concepts to development of home environment. Activity 8 hours. May be repeated to maximum of 8 units.

464 Materials and Resources for Residential Interiors (4)

Prerequisite: Home Economics 360 or equivalent. Materials and services; development of designs using interior finishing materials. Lecture and field trips.

465 History of Housing (4)

Prerequisite: Home Economics 460 or consent of instructor. Development of housing in America from seventeenth century to present; international influences; social, economic and cultural influences; architects and architectural styles and movements.

466 History of Furnishings and Interiors: Antiquity to Mid-18th Century (4)

Prerequisite: Home Economics 360 or basic design course in art. Major furnishings and interior style developments from ancient times to mid-eighteenth century; influences of changing cultural patterns, materials, methods, designers, and philosophies.

467 History of Furnishings and Interiors: Neoclassic to Present (4)

Prerequisite: Home Economics 360 or basic design course in art. Major furnishings and interior style developments from neoclassic period to present; influences of changing cultural patterns, materials, methods, designers, and philosophies.

470 Demonstration Techniques (4)

Practice in techniques used in promotional and educational demonstrations; field experience through cooperation with local business and utility companies. Lecture 2 hours, laboratory 6 hours.

471 Communication of Home Economics Concepts (4)

Prerequisites: English 150A or B, Speech Communication 150, and minimum of 20 units in home economics, or consent of instructor. Aspects of communication specific to home economics in education, community service, and business. Audio and visual communication techniques, motion and still photography, graphics, public performance techniques, writing for news media, and educational television. Meets 8 hours weekly.

479 Clinical Interactions in Dietetics (4)

Prerequisites: Home Economics 315 and 417A; Psychology 150. Role, responsibilities and practices of dietitian as a nutrition teacher on health care team. Lecture 3 hours, laboratory 3 hours. Concurrent weekly professional colloquium required.

480 Special Studies in Home Economics (2-4)

Intensive study of an area of home economics. Area of special study announced in *Schedule of Classes*. May be repeated to maximum of 8 units as subject matter changes.

481 Contemporary Issues in Home Economics (4)

Prerequisites: Senior standing; minimum of 24 units in home economics. Current developments, problems, and issues in field of home economics, with emphasis on urban California.

491 Programs for Occupational Education in Home Economics (4)

Prerequisites: Senior standing; minimum of 20 units in home economics or consent of instructor. Survey, organization, implementation and coordination of home economics wage earning programs in high schools and community colleges.

495 Field Work in Home Economics (2-4)

Prerequisites: Thirty-five units in home economics, at least 15 of which must be upper division, and departmental approval. Supervised experience utilizing professional preparation in field setting. Graded CR/NC only. Lecture 1 hour, laboratory 6 hours.

499 Undergraduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Project selected in conference with sponsor before registration; progress meetings held regularly, and final report submitted. May be repeated for credit.

Industrial Studies

In School of Fine and Applied Arts

The Department of Industrial Studies offers undergraduate study in eight areas of technical skills, and professional courses at both undergraduate and graduate levels for the preparation of Industrial Education and Vocational Education specialists.

The graduate degree programs are described in the *Graduate Programs* section.

The Faculty

Professors: Cortland Doan, Raymond E. Fausel, Keith E. Gummere, Richard J. Hoffman, John LaMonica, William A. Mays, Kenneth Phillips (Chairperson), Kenneth N. Sweetnam, Norwood Teague, Kenneth R. Thomas, David L. Welch, Fred W. Zahrt, Jr.

Associate Professor: Gregory Graham.

Assistant Professors: Kenneth F. Hird, Clarence N. Hjelmervik, Edward F. Marsoobian, Richard Resurrección.

The Undergraduate Program

The Department of Industrial Studies offers baccalaureate programs leading to the Bachelor of Arts degree in Industrial Arts, the Bachelor of Science degree in Industrial Technology, options in Printing Management, and in Fire Protection Administration, and the Bachelor of Vocational Education degree. A minor in Industrial Studies is available for students majoring in other fields.

Bachelor of Arts in Industrial Arts

The Bachelor of Arts degree program in Industrial Arts is designed generally for students who plan to become Industrial Education teachers.

Requirements for the Major

Required for the major are 80 units of study in professional and technical areas.

Undergraduate Professional Courses

Required in this area are 23 units of courses in Industrial Studies as follows:

- 101 Industrial Safety for Industrial Education (3)
- 200 History of Technology (3)
- 300AB Foundations of Industrial Education (2-2)
- 380 Industrial Graphic Communication Technology (3)
- 381 Materials, Process, and Fabrication Technology (3)
- 382 Power Technology (3)
- 481 Practicum in Industrial Studies (4)

Undergraduate Technical Program

A minimum of 57 units in technical courses from the three areas below is required.

FOUNDATION PROGRAM

Required in Industrial Studies (24 units):

- 100 Introduction to Automotive Mechanisms (3)
- 110 Introduction to Drafting (3)

- 120 Introduction to Electronics (3)
- 130 Introduction to Graphic Arts (3)
- 144 Introduction to Industrial Design (3)
- 160 Introduction to Metalworking (3)
- 170 Introduction to Wood Technology (3)
- 290 Introduction to Photography (3)

Area of Concentration (21 units):

Select a total of 21 units of intermediate and advanced courses and laboratory work from one of the following areas: (1) Automotive, (2) Drafting, (3) Electronics, (4) Graphic Arts, (5) Industrial Crafts, (6) Metal Technology, (7) Photography, (8) Wood Technology. Where needed, select additional related courses with approval of adviser. As a rule, one or two of these courses will be in lower division (3 or 6 units) and the remainder in upper division (15-18 units).

Additional Specialization (12 units):

The remaining 12 units needed to satisfy the requirements for the major can be chosen to strengthen the first area of concentration, or, with approval of adviser, to develop a second area of concentration.

Bachelor of Science in Industrial Technology: Printing Management

The option in Printing Management has been designed to give students extensive training in the graphic arts industry as well as a grasp of the principles and techniques of business management. The curriculum has been developed through close consultation with the graphic arts industry.

Requirements for the Major

Required for the major are 83-86 units, of which 39-42 are in Graphic Arts and 44 are in Business and Economics.

The lower division program is concerned primarily with acquisition of skills and techniques of the printing industry; the upper division portion is concerned primarily with business

management. Students who have not had work experience with a printing concern will be advised to complete at least two units of Industrial Studies 398.

Lower Division

Required Courses (22 units):

- 130 Introduction to Graphic Arts (3)
- 231 Graphic Arts Production Planning (3)

In Business:

- 200AB Principles of Accounting (3-3)
- 205 Foundations of Business Law (4)

In Economics:

- 201AB Introduction to Economics (3-3)

Upper Division

Required in Industrial Studies (33 units):

- 331 Typography I (3)
- 332 Typography II (Machine Composition) (3)
- 333 Presswork Procedures (3)
- 431 Lithography I (3)
- 432AB Typographical Layout and Design I, II (4-5)
- 433 Printing Estimating (5)
- 434 Printing Plant Management (4)
- 435 Lithography II (3)

Elective in Industrial Studies (0-3 units):

- 398 Cooperative Education (1-3)

Required in Business (8 units):

- 300 Managerial Accounting (4)
- 305 Commercial Law (4)

Electives in Business (12 units):

Select one of the following:

- 303 Business Finance (4)
- 306 Introduction to Management Science (4)
- Select one of the following:
- 304 Principles of Marketing (4)
- 330 Credits and Collections (4)
- 341 Selling and Sales Administration (4)

Select one of the following:

- 313 Office Organization and Management (4)
- 460 Case Studies in Business Management (4)
- 468 Small Business Management (4)

Required in Economics (4 units):

- 303 Money, Banking, and the Economy (4)

Elective in Economics (4 units):

Select one of the following:

- 302 Labor Economics (4)
- 310 Economics of the Business Firm (4)

Bachelor of Science in Industrial Technology: Fire Protection Administration

Requirements for the Major

Required for the degree are 186 quarter units, including applicable lower division preparation in a community college. General Education requirements in the CSUC pattern may be met either in a community college or at Cal State L.A. The major with this option requires a total of 100-108 quarter units.

A minimum of 15 semester units is required in

transferable community college courses, as follows:

- Fundamentals of Fire Prevention (3)
- Fire Protection Equipment and Systems (3)
- Fire Fighting Tactics and Strategy (3)
- Building Construction for Fire Protection (3)
- Fire Company Organization and Management (3)

A maximum of 6 semester units may be taken in transfer courses as lower division electives, distributed as shown below.

Select 0-6 semester units from following:

- Related Codes and Ordinances (3)
- Fire Hydraulics (3)
- Hazardous Materials I (3)
- Hazardous Materials II (3)
- Rescue Practices (3)
- Fire Investigation I (3)
- Fire Apparatus and Equipment (3)
- Wildland Fire Control (3)
- Fire Service Communications Systems (3)
- Fire Service Records and Reports (3)

Transferable into the major program: 22-32 quarter units.

The remainder of the option is primarily upper division work, with 68-86 quarter units required. Of these courses, a maximum of 12 units may be taken in lower division courses.

Required Courses:

In Business (4 units):

- 301 Administrative Communications (4)

In Industrial Technology (28 units):

- 350 Fire Protection and the Community (4)
- 351AB Fire Defense Planning (4-4)
- 352AB Fire Protection Aspects of Building Design (4-4)
- 353 Fire Disaster Administration (4)
- 452 Fire Prevention Administration (4)

In Political Science (20 units):

- 201AB Principles of Political Science I (2-2)
or
- 415 Political Sociology (4)
- 403 State and Local Government (4)
- 460 Foundations of Public Administration (4)
- 463 Public Personnel Administration (4)
- 466 Public Financial Administration (4)

Electives in Related Fields (16-34 units):

Select courses as shown below, with approval of adviser and attention to prerequisites.

Select 8 units from following:

In Economics:

- 300 Economics for Engineers (4)

In Political Science:

- 461 Municipal Administration (4)
- 470 Public Relations in Government (4)
- 472 Organization and Management (4)
- 473 Systems Design in Government (4)
- 496 Proseminar in Public Administration (2)

In Statistics:

- Sociology 210AB Elementary Statistics (3-3)
or

- Political Science 280 Quantitative Methods in Political Science (4)

Select 8 units from following:

In Industrial Technology:

- 355 Fire Protection Laws (4)

In Political Science:

- 404 Urban Government and Politics (4)

In Sociology:

- 201 Introductory Sociology (4)
 202 Social Problems and Institutions (4)
 420 Small Groups (4)

Select 0-18 units from following:

In Industrial Technology:

- 451 Fire Prevention and Building Codes:
 Interpretation and Enforcement (4)
 453AB Fire Protection Systems Design (4-4)
 455AB Fire Protection of Structural Members and
 Building Components (4-4)

In Engineering:

- 352 Technological Aspects of Urban
-
- Environment (4)

Bachelor of Vocational Education Degree

The Bachelor of Vocational Education degree is offered for those vocational teachers recommended by the California State Board of Examiners for Vocational Teachers. Vocational teachers interested in details regarding this program should see the Industrial Studies adviser for the Bachelor of Vocational Education degree.

Requirements for the Major

A total of 186 units is required for the Bachelor of Vocational Education degree, of which 87-102 units are taken in the following areas:

1. The Vocational Teacher Education program has a requirement of 33-42 units. Candidates should contact a university offering the required teacher education courses in vocational education.
2. The major in Vocational Arts has a requirement of 54-60 units. Credit awarded by the State Board of Vocational Examiners applies toward this major. Applicants for credit should contact the Chief of the Bureau of Industrial Education, 721 Capitol Mall, Sacramento, California 95814.

Minor in Industrial Studies

A minimum of 36 units is required for a minor in Industrial Studies. Included in a typical program for the minor are 3-9 units in lower division courses. However, the number of units may vary with the choice of an area of concentration and the selection of electives.

Area of Concentration (24 units):

At least 24 units are selected as a sequence in one of the eight areas of concentration listed above for the Industrial Arts major. The normal pattern for an area of concentration is the introductory course and seven additional courses in Industrial Studies in the same area. Where needed, select related courses in other areas with approval of adviser.

Required Professional Courses (4 units):

- 300AB Foundations of Industrial Education (2-2)

Electives in Industrial Studies (8 units):

Select additional courses, with prior approval of adviser. If basic college course in drafting has not been taken, Industrial Studies 110 is required for 3 of the 8 units.

The Credential Program

The B.A. degree program in Industrial Arts has been approved by the Commission for Teacher Preparation and Licensing for examination waiver for the single subject credential in Industrial Arts. Students should consult advisers in both the Department of Industrial Studies and the School of Education.

Courses of Instruction

NOTE: Undergraduate courses in Industrial Studies are arranged under subject matter areas, as follows: Automotive, Drafting, Electronics, Graphic Arts and Printing Management, Industrial Crafts, Industrial Design, Metal Technology, Photography, Wood Technology, and Professional and Elective. Undergraduate courses used in the Fire Protection Administration option are listed under the heading Industrial Technology.

*Automotive***100 Introduction to Automotive Mechanisms (3)**

Designed to meet general industrial education needs of Industrial Studies majors. Emphasis on general mechanical concepts and related physical principles, maintenance procedures, and consumer data. Lecture 1½ hours, laboratory 4½ hours.

201 Automotive Electrical System (3)

Operating principles of battery, starter, charging and accessory circuits of automobile; skill in diagnosis, testing and repair procedures. Lecture 1½ hours, laboratory 4½ hours.

301 Fuel and Ignition Systems (3)

Prerequisite: Industrial Studies 201. Theories of design and operation of ignition and fuel system components; techniques of engine trouble-shooting and tune-up procedures. Lecture 1½ hours, laboratory 4½ hours.

401 Engine Rebuilding (3)

Prerequisite: Industrial Studies 404. Theory of engine design, function, and operation, skill in engine rebuilding and engine machine tool operation. Lecture 1½ hours, laboratory 4½ hours.

402 Power Transmission Systems (3)

Prerequisite: Industrial Studies 100. Theory of clutch mechanisms, fluid couplings, torque converters, automatic transmission, overdrive and rear axle assemblies; repair and service of the power train. Lecture 1½ hours, laboratory 4½ hours.

403 Chassis and Suspension Systems (3)

Prerequisite: Industrial Studies 100. Theory and design of brakes, front ends, wheel alignment and balance; includes testing, trouble diagnosis and repair procedures. Lecture 1½ hours, laboratory 4½ hours.

404 Small Power Plants (3)

Prerequisite: Industrial Studies 100. Design, construction, and service operations of one-cylinder engines, outboard motors, and gas turbines; emphasis on preventive maintenance procedures and testing. Lecture 1½ hours, laboratory 4½ hours.

405 Engine Design and Performance (3)

Prerequisite: Industrial Studies 401. Theory of engine design and operation; requirements of modern gasoline power plants are studied and performance factors analyzed under varying operating conditions; emphasis on dynamometer testing, engine disassembly and assembly. Lecture 1½ hours, laboratory 4½ hours.

Drafting**110 Introduction to Drafting (3)**

Application of theory and fundamentals of drafting; orthographic projection techniques applied for a basic understanding of architectural, machine, forging, casting, welding, and electronic drafting. Lecture 1½ hours, laboratory 4½ hours.

311 Architectural Drafting I (3)

Prerequisite: Industrial Studies 110. Architectural design with reference to building codes, construction details, financing and planning of residential or light commercial structures; critical analysis and comparison of various types of architecture and framing systems. Lecture 1½ hours, laboratory 4½ hours.

312 Technical Illustration (3)

Prerequisite: Industrial Studies 110. Basic principles of technical illustration with emphasis on industrial techniques; introduction to newest mechanical aids, grids and templates for production of isometric, dimetric and perspective drawings. Lecture 1½ hours, laboratory 4½ hours.

411 Tool Design (3)

Prerequisite: Industrial Studies 110. Application of principles of precision dimensioning, mechanics and drafting to design of machines, tools, gears, and cams, selection and design of tools for mass production. Lecture 1½ hours, laboratory 4½ hours.

412 Manufacturing and Construction Drafting (3)

Prerequisite: Industrial Studies 110. Development of schematics, pictorials and printed circuits in electronics, design and layout of sheet metal ducts for heating and air conditioning, techniques of piping drafting. Lecture 1½ hours, laboratory 4½ hours.

413 Architectural Drafting II (3)

Prerequisite: Industrial Studies 311 for Industrial Studies majors; Industrial Studies 110 or Home Economics 360 and 460 for Home Economics majors. Techniques of architectural rendering; application of color, shades and shadows; use of grids and other mechanical devices; construction of architectural models. Lecture 1½ hours, laboratory 4½ hours.

415 Electromechanical Drafting and Design (3)

Prerequisites: Industrial Studies 110 and 120, or consent of instructor. Application of industrial methods of electromechanical drafting and design documentation through block diagrams, elementary diagrams, conversion drawings, master drawings, detail and assembly drawings, and generation of hardware. Lecture 1½ hours, laboratory 4½ hours.

Electronics**120 Introduction to Electronics (3)**

General Industrial Education course emphasizing the importance of electronics; direct current fundamentals, special application of electronics, and occupational information. Lecture 1½ hours, laboratory 4½ hours.

221 Basic Electronics (3)

Prerequisite: Industrial Studies 120; Mathematics 102, 103, and Physics 101 recommended. Electronics related to inductance, capacitance, alternating current fundamentals, resonance, filters, electron tubes, semi-conductors, measuring instruments. Lecture 1½ hours, laboratory 4½ hours.

321 Electronic Circuits (3)

Prerequisite: Industrial Studies 221; Physics 102 recommended. Application and design of electronic circuits, electron tube amplifiers, transistor amplifiers, audio amplifiers, radio frequency amplifiers, power supplies, oscillators, motors, generators, special circuits, instrumentation. Lecture 1½ hours, laboratory 4½ hours.

421 Communications (3)

Prerequisite: Industrial Studies 321. Electronic circuit application and design related to electronic communications; telegraph, telephone, modulation, propagation, generation and transmission of electromagnetic waves, amateur radio, government licensing, instruments and test equipment. Lecture 1½ hours, laboratory 4½ hours.

422 Radio (3)

Prerequisite: Industrial Studies 421. Electronic circuit application and design related to radio receivers; tuned-radio frequency, superheterodyne, AC/DC, portable communications, automobile, FM, AM-FM, instruments, test equipment, and receiver servicing. Lecture 1½ hours, laboratory 4½ hours.

423 Television (3)

Prerequisite: Industrial Studies 421. Electronic circuit applications related to television: monochrome television, color television, closed circuit television, instruments, test equipment, and television servicing. Lecture 1½ hours, laboratory 4½ hours.

424 Industrial Controls (3)

Prerequisite: Industrial Studies 321. Circuit applications and design related to industrial control electronics: transducers, photoelectrics, motors, generators, servomechanisms, magnetic amplifiers, dielectric amplifiers, counters, indicators, control circuits, computers, instruments and test equipment. Lecture 1½ hours, laboratory 4½ hours.

425 Advanced Electronic Systems (3)

Prerequisite: Industrial Studies 321. Advanced electronic systems involving the design and application of radar, navigational, guidance, computing, sonic, control, servo, and special systems. Lecture 1½ hours, laboratory 4½ hours.

Graphic Arts and Printing Management**130 Introduction to Graphic Arts (3)**

General Industrial Education course emphasizing the importance of graphic communications in our culture. History, theory, and laboratory-shop practice of varied printing processes, including letterpress, lithography, silk screen, and bookbinding. Lecture 1½ hours, laboratory 4½ hours.

231 Graphic Arts Production Planning (3)

Prerequisite: Industrial Studies 130 or consent of instructor based on previous training or occupational experience. Copy preparation, selection of paper and processes for printed material; cold type, paste-up techniques, reproduction proofs and camera use emphasized. Lecture 1½ hours, laboratory 4½ hours.

331 Typography I (3)

Prerequisite: Industrial Studies 130 or consent of instructor based upon previous training or occupational experience. Intensive study of typography with emphasis on problems of type composition, make-up, imposition and lock-up. Lecture 1½ hours, laboratory 4½ hours.

332 Typography II (3)

Prerequisite: Industrial Studies 331. Principles of typography involved in machine composition; emphasis on operation and maintenance of slug casting machines. Lecture 1½ hours, laboratory 4½ hours.

333 Presswork Procedures (3)

Prerequisite: Industrial Studies 130. Letterpress principles and procedures on platen and cylinder presses, makeready, inks, automatic feeders. Lecture 1½ hours, laboratory 4½ hours.

431 Lithography I (3)

Prerequisite: Industrial Studies 331. Lithographic theory and practice: copy preparation, camera, plate preparation, presswork, chemistry of lithography, photographic principles, color theory, printing inks and paper. Lecture 1½ hours, laboratory 4½ hours.

432A Typographic Layout and Design I (4)

Prerequisite: Course in typography or consent of instructor. Basic principles of design applied to products of the printer; thumbnail sketches, rough and finished layouts in solution of copy-fitting problems; selection of type, paper, and processes for reproduction.

432B Typographic Layout and Design II (5)

Prerequisite: Industrial Studies 432A. Continuation of 432A with stress upon layout and design of complete projects; use of working dummies to illustrate problems of printing production; elements of book design.

433 Printing Estimating (5)

Prerequisite: Industrial Studies 435 or consent of instructor. Elements of estimating all classes of printing and lithography involving type composition, presswork, binding, paper, photo engravings, cost-finding problems.

434 Printing Plant Management (4)

Prerequisite: Senior standing in Printing Management major. Organization and management of all departments in the printing plant; application of industrial management factors to the departments; inspection trips to study production methods and organization of local printing plants.

435 Lithography II (3)

Prerequisite: Industrial Studies 431. A continuation of Industrial Studies 431, with additional emphasis on camera, plate preparation and press operation. Lecture 1½ hours, laboratory 4½ hours.

436 Graphic Arts Processes (3)

Prerequisite: Industrial Studies 130. Allied processes of graphic arts, including silk screen, bookbinding, paper making, and other graphic arts processes and activities. Lecture 1½ hours, laboratory 4½ hours.

Industrial Crafts**241 Industrial Crafts (3)**

Prerequisites: Industrial Studies 160 and 170, or consent of instructor. Introduction to materials and processes of enameling, woodcarving, precision casting and working of metal, and applications in industry; projects using these materials and processes. Lecture 1½ hours, laboratory 4½ hours.

341 Industrial Enameling (3)

Prerequisite: Industrial Studies 241. History, materials, processes and application of industrial enameling; principles and procedures of modern application in industry. Lecture 1½ hours, laboratory 4½ hours.

342 Woodcarving (3)

Prerequisite: Industrial Studies 241. History, materials, processes and application of woodcarving; principles and procedures of modern application in industry. Lecture 1½ hours, laboratory 4½ hours.

442 Plastics Technology (3)

Prerequisite: Industrial Studies 241. History, materials, processes and application of plastics technology; principles and procedures of modern application in industry. Lecture 1½ hours, laboratory 4½ hours.

Industrial Design**144 Introduction to Industrial Design (3)**

Creative problem-solving and esthetics, application through two- and three-dimensional exploratory exercises in color, texture, shape, form, structure, and space and through simple industrial design problems. Lecture 1½ hours, laboratory 4½ hours.

Metal Technology

160 Introduction to Metalworking (3)

Basic metal properties, metalworking processes, and hand and machine tool applications. Lecture 1½ hours, laboratory 4½ hours.

261 Sheet Metal Layout and Development (3)

Prerequisite: Industrial Studies 160. Sheet metal layout and development, cutting, forming, fastening, finishing; industrial applications of these processes. Lecture 1½ hours, laboratory 4½ hours.

361 Welding Technology (3)

Prerequisite: Industrial Studies 160. Inert-gas, oxy-acetylene, and electric arc welding, cutting, brazing, and testing theory and practice. Lecture 1½ hours, laboratory 4½ hours.

362 Heat Treating and Metallurgy (3)

Prerequisite: Industrial Studies 160. History, techniques and principles of forging, heat treating, and metallurgy. Lecture 1½ hours, laboratory 4½ hours.

461 Molding and Casting (3)

Prerequisite: Industrial Studies 160. Techniques, principles, and practices of metal molding and casting. Lecture 1½ hours, laboratory 4½ hours.

463 Metal Machining I (3)

Prerequisite: Industrial Studies 160. Construction, utilization and laboratory applications of the engine lathe, shaper, and milling machines. Lecture 1½ hours, laboratory 4½ hours.

464 Metal Machining II (3)

Prerequisite: Industrial Studies 160. Advanced study of engine lathe, shaper, milling machines, and grinding machines with emphasis on special setups and applications. Lecture 1½ hours, laboratory 4½ hours.

465 Automated Metal Machining (3)

Prerequisite: Industrial Studies 160. Advanced study of metal machining with emphasis on semi-automatic, automatic, tape controlled, and grinding operations. Lecture 1½ hours, laboratory 4½ hours.

Photography

290 Introduction to Photography (3)

Principles of photography, camera and darkroom techniques. Lecture 1½ hours, laboratory 4½ hours.

391 Color Photography (3)

Prerequisite: Industrial Studies 290 or equivalent. Principles of color photography, exposure and processing techniques as applied to current films. Lecture 1½ hours, laboratory 4½ hours.

392 Color Printing (3)

Prerequisite: Industrial Studies 391 or equivalent. Principles and practices of making color prints. Lecture 1½ hours, laboratory 4½ hours.

492 Functional Photography (3)

Prerequisite: Industrial Studies 290 or equivalent. Principles and practices of photography in industry, business and research, including photography with invisible light, magnification by photography and copying. Lecture 1½ hours, laboratory 4½ hours.

493 Advanced Photography (3)

Prerequisite: Industrial Studies 290 or equivalent. Advanced photographic techniques for the photography teacher, photomechanical reproduction, organization and problems in teaching photography. Lecture 1½ hours, laboratory 4½ hours.

494 Art in Photography (3)

Prerequisite: Industrial Studies 290 or equivalent. Explanation of imaginative creativity through photographic media, with emphasis on composition, experimentation and scope of photography. Lecture 1½ hours, laboratory 4½ hours.

495 Advertising and Photography (3)

Prerequisite: Industrial Studies 290 or equivalent. Organization of pictorial elements to create a direct and forceful message; integration of photographic and graphic arts. Lecture 1½ hours, laboratory 4½ hours.

496 Motion Picture Photography (3)

Prerequisite: Industrial Studies 290 or equivalent. Principles and practices of motion picture photography, background of general film production. Lecture 1½ hours, laboratory 4½ hours. May be repeated to maximum of 6 units.

Wood Technology

170 Introduction to Wood Technology (3)

Woodworking industries, their origins, developments, technical aspects and influences upon man's occupational, social, cultural, recreational, and consumer activities; safety, common properties, characteristics, structure, shaping, finishing processes of wood and its industrial usage. Lecture 1½ hours, laboratory 4½ hours.

271 Wood Construction Technology I (3)

Prerequisite: Industrial Studies 170. Physical and mechanical properties of wood and its architectural usage; application of uniform building code to construction of dwellings. Lecture 1½ hours, laboratory 4½ hours.

272 Wood Construction Technology II (3)

Prerequisite: Industrial Studies 170. Cabinetmaking and millwork procedures used in industry. Design, joinery, hardware, manufacture of plywood and veneers. Lecture 1½ hours, laboratory 4½ hours.

372 Wood Finishing and Preservation (3)

Prerequisite: Industrial Studies 170. Protection of wood against deterioration by fire, moisture, insects, fungus, and weather; surface enrichment emphasized. Experiments and application of protective materials including finishes. Lecture 1½ hours, laboratory 4½ hours.

471 Lamination, Forming, Bonding (3)

Prerequisite: Industrial Studies 170. Processes of lamination and forming of wood and other materials. Equipment and bonding materials; laminating and forming characteristics of various materials; laboratory portion includes design and construction. Lecture 1½ hours, laboratory 4½ hours.

472 Wood Manufacturing Technology I (3)

Prerequisite: Industrial Studies 170. Structure, identification, defects, curing, grading, joining, and fastening of commercial woods and related materials; design and construction of furniture and accessories. Lecture 1½ hours, laboratory 4½ hours.

473 Wood Manufacturing Technology II (3)

Prerequisite: Industrial Studies 472. Mass production of products using wood as a basic material; design and development of jigs, fixtures and tooling; design and production of items. Lecture 1½ hours, laboratory 4½ hours.

Professional and Elective**101 Industrial Safety for Industrial Education (3)**

Industrial safety related to industry and school shops; history, accident facts, liability, psychology, worker performance, sources of information, and industrial methods of operation.

200 History of Technology (3)

Human accomplishment in areas of discovery, invention, industry from prehistoric times to present.

280 Tools for the Artist (3)

Safe, efficient and appropriate operation, adjustment and maintenance of power and hand tools used by artist. Not appropriate for Industrial Arts majors or minors; Art majors and minors have enrollment preference.

300AB Foundations of Industrial Education (2-2)

Philosophy and development of industrial education, its present place and function in elementary and secondary education.

380 Industrial Graphic Communication Technology (3)

Concept of graphic communication technology in industrial education. Emphasis on practices in modern industry; examination of recent and projected technological developments.

381 Materials, Process, and Fabrication Technology (3)

Technologies in conversion of raw materials to products; essential concepts and manipulative operations for cutting, forming, fastening, finishing, and testing wood, ferrous and non-ferrous metals, plastics, ceramic materials.

382 Power Technology (3)

Power technology concept in industrial education; survey of available energy, various forms of power conversion; utilization of power in modern industry and in industrial production processes.

398 Cooperative Education (1-3)

Prerequisites: An overall grade point average of 2.35, upper division standing in departmental major or minor, and approval by departmental coordinator prior to registration. Active employment, with regular meetings to discuss student's progress. May be repeated to maximum of 6 units. Graded CR/NC only.

454 Special Topics in Industrial Studies (1-4)

Prerequisites: Upper division standing; other prerequisites as needed for specific topic. Current issues, problems, and interests in industrial studies. May be repeated to maximum of 9 units as subject matter changes.

480 Comprehensive General Shop (3)

Prerequisite: Completion of required foundation program for Industrial Arts major. General shop movement, organization and operation of multiple laboratory programs, design and construction of projects and aids; laboratory organization and management procedures. Lecture 1½ hours, laboratory 4½ hours.

481 Practicum in Industrial Studies (4)

Prerequisites: Completion of an area of concentration and consent of instructor. Application of industrial studies concepts and skills to design, production, and/or servicing of commercial and industrial products and devices. Lecture 2½ hours, laboratory 4½ hours. May be repeated to maximum of 8 units.

483AB Construction of Teaching Aids (2-2)

Development of instructional aids for industrial education, such as cutaway models, mock-ups, assignment boards, checking devices for course coverage, blown-up models, electrical identification panels, procedure boards, specimens and project materials. Activity 4 hours.

485 History, Philosophy and Organization of Industrial Education (3)

Prerequisites: Industrial Studies 300AB, upper division standing, major or minor in Industrial Arts or major in Vocational Arts. History and philosophy of industrial education in Western civilization, comparative study of development and organization of industrial education in the United States.

486 Seminar in Vocational Education (1-4)

Prerequisite: Upper division standing or consent of instructor. Problems in maintaining and modifying vocational education programs. Emphasis on changing philosophies, concepts, practices, legislation, technical content, instruction, organization, and management. May be repeated with consent of instructor.

490 Advanced Problems in Industrial Studies (1-9)

Prerequisites: Completion of an area of concentration and consent of instructor. Advanced problems in a specific industrial arts area of concentration. Lecture 1½ hours, laboratory 4½ hours for 3 units; other unit values use same ratio.

490a Automotive

490d Drafting

490e Electronics

- 490g Graphic Arts
- 490c Industrial Crafts
- 490m Metal Technology
- 490p Photography
- 490w Wood Technology

498 Seminar in Comprehensive Career Education for Industrial Studies and Vocational Education (3)

Prerequisite: Upper division standing or consent of instructor. Development, organization, and implementation of comprehensive career education for industrial arts and vocational education. Emphasis on concepts, techniques, strategies, implementation, levels of instruction, leadership, administration, and organization. May be repeated to maximum of 9 units as subject matter changes.

499 Undergraduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Project selected in conference with sponsor before registration; progress meetings held regularly, and final report submitted. May be repeated for credit.

Industrial Technology

350 Fire Protection and the Community (4)

Relationship of fire service and fire protection needs to critical urban issues, affirmative action, public education, communication with minority groups, inter- and intradepartmental relations.

351AB Fire Defense Planning (4-4)

Community fire defense needs, facilities, master plan development, federal assistance. Application of ISO Grading Schedule and Guide for Determining Fire Flow Requirements; impact of insurance. Field trips required.

352AB Fire Protection Aspects of Building Design (4-4)

Building construction including fire resistive materials, protective systems, testing of fire assemblies, heat and

smoke detection devices, high-rise structures; plan checking. Field trips required.

353 Fire Disaster Administration (4)

Fire disaster protection organization; disaster laws; establishment of central communications and field control centers; support groups, manpower, and equipment; overhaul and security; disaster and civil defense relationships.

355 Fire Protection Laws (4)

Authority for fire department operations; pertinent federal, state, and local laws; fire department liability, member and citizen liability; fire department trial boards.

451 Fire Prevention and Building Codes: Interpretation and Enforcement (4)

Prerequisite: Industrial Technology 352AB or consent of instructor. Interpretation of building, fire prevention, and State Fire Marshall codes; review of building plans; enforcement procedures and techniques; case studies and problems in code enforcement.

452 Fire Prevention Administration (4)

Prerequisite: Industrial Technology 451 or consent of instructor. Organization of Fire Prevention Bureau; laws and regulations, building and fire code administration; coordination with governmental and other organizations; functions of Fire Prevention Bureau; planning and training.

453AB Fire Protection Systems Design (4-4)

Theories, principles, and types of fire protection systems; design and hydraulic calculations for sprinkler systems; review of fire protection systems plans.

455AB Fire Protection of Structural Members and Building Components (4-4)

Fire protection of structural members, building components and materials; their reaction under tension, compression, and shear during fire exposure.

Journalism

In School of Letters and Science

The Department of Journalism offers the Bachelor of Arts degree in Journalism. The program combines technical preparation in publications with multi-disciplinary development to serve a wide variety of career possibilities. A minor in Journalism is available for students majoring in other fields.

The Faculty

Professor: Robert E. Blackmon (Chairperson).

Associate Professor: Nicholas Beck.

Assistant Professor: Barbara Straus Reed.

The Undergraduate Program

Students who complete the preprofessional major in Journalism are prepared for careers in (1) editorial and advertising departments of newspapers, magazines and industrial organs, (2) public relations programs in business, government, colleges and city school systems, (3) editorial and business staff work with radio and television stations. Career objectives can be met by specialization in either advertising, news-editorial, or public relations, each offered as a sequence in the Journalism major.

Requirements for the Major

A minimum of 79 units is required, including a core of 23 units in Journalism taken by all, a specialization sequence of 24 units in Journalism courses and 32–34 units of interdisciplinary course work.

Lower Division

Required Core in Journalism (8 units):

- 201 News Writing (4)
- 202 Reporting (4)

Upper Division

Required Core in Journalism (15 units):

- 330 News Editing I (4)
- 391 University Times (3)
- 400 History and Philosophy of Mass Media (4)
- 441 Social Responsibility of Press (4)

Specialization Sequence (24 units):

Students complete this required concentration by electing one of the following three sequences.

Advertising Sequence

Required in Journalism (16 units):

- 338 Newspaper Typography and Design (4)
- 470 Newspaper Management (4)
- 471 Newspaper Advertising (4)
- 475 Advertising Copy and Layout (4)

Electives in Journalism (8 units):

- Select two from following:
- 331 News Editing II (4)

- 460 Industrial Magazine Publishing (4)
- 491 Law of Mass Media of Communication (4)
- 492 Radio and Television News Writing (4)
- 496 Publicity and Public Relations (4)

News-Editorial Sequence

Required in Journalism (12 units):

- 491 Law of Mass Media of Communication (4)
- 493 Editorial and Interpretive Writing (4)
- 494 Reporting of Public Affairs (4)

Electives in Journalism (12 units):

Select three from following:

- 331 News Editing II (4)
- 338 Newspaper Typography and Design (4)
- 345 Magazine Article Writing (4)
- 470 Newspaper Management (4)
- 471 Newspaper Advertising (4)
- 492 Radio and Television News Writing (4)
- 496 Publicity and Public Relations (4)

Public Relations Sequence

Required in Journalism (12 units):

- 460 Industrial Magazine Publishing (4)
- 496 Publicity and Public Relations (4)
- 497 Public Relations Problems (4)

Electives in Journalism (12 units):

Select three from following:

- 331 News Editing II (4)
- 338 Newspaper Typography and Design (4)
- 470 Newspaper Management (4)
- 471 Newspaper Advertising (4)
- 491 Law of Mass Media of Communication (4)
- 492 Radio and Television News Writing (4)
- 493 Editorial and Interpretive Writing (4)
- 494 Reporting of Public Affairs (4)

Courses in Related Fields (32 units):

In addition to the 47 units required in Journalism, students select at least 32 units from courses listed below to complete a major of at least 79 units.

(1) Select a concentration of 16–18 units from one of the following subject fields. All courses are 4 quarter units unless otherwise indicated.

Economics 200AB or 301 (6), 302, 303, 390, 412, 460, 471, 480

English: any 400-level courses up to 490

History 101ABC, 150 or any 400-level course except 497

Political Science 201ABC (2-2-2), 202AB (2-2), 403, 404, or any other 400-level course up to 479

Sociology 201, 202, 390, 414, 415, 424, 430, 480, 482
(2) Select additional courses from any of fields listed above and below which are not part of concentration, to bring total courses in related field to 32-34 units.

American Studies 401, 402, 403

Business 304

Chicano Studies 111AB, 150, 410AB, 430, 444

Pan-African Studies 251AB, 303AB, 400

Philosophy 250, 304, 410

Psychology 308, 410AB (3-3), 418AB (3-3), 420, 422

Speech Communication 176, 371, 485

Minor in Journalism

Careers in journalism are not limited to those who major in the field. An appropriate alternative is to major in another subject and take the minor in Journalism, which consists of 12 units of lower division and 23 units of upper division courses. A Journalism minor will introduce students to an interesting career field and provide them with the fundamentals of professional preparation.

Lower Division

Required in Journalism (12 units):

100 Survey of American Mass Media (4)

201 News Writing (4)

202 Reporting (4)

Upper Division

Required in Journalism (23 units):

330 News Editing I (4)

338 Newspaper Typography and Design (4)

391 University Times (3)

400 History and Philosophy of Mass Media (4)

441 Social Responsibility of Press (4)

493 Editorial and Interpretive Writing (4)

or

494 Reporting of Public Affairs (4)

The Credential Program

The Department of Journalism currently offers no approved program for examination waiver for the single subject credential in English. Students should consult advisers in the department and in the School of Education.

Courses of Instruction

Ability to type or concurrent enrollment in typing is a prerequisite for all students majoring in Journalism.

Lower Division Courses

100 Survey of American Mass Media (4)

Survey of mass media of communication: special emphasis on newspapers, magazines, motion pictures, radio, television, advertising, and public relations.

201 News Writing (4)

Prerequisite: Basic typing ability. Introduction to news writing and reporting. News sources, collection of news, acceptable forms for news stories, and newspaper style.

202 Reporting (4)

Prerequisites: Basic typing ability and Journalism 201. Specialized reporting, feature writing and staff work on the newspaper. Provides base for advanced journalism courses.

Upper Division Courses

330 News Editing I (4)

Prerequisites: Journalism 201 and 202. Study and practice in basic editing skills and headline fundamentals with progression to advanced editing skills and writing of polished headlines.

331 News Editing II (4)

Prerequisites: Journalism 330 and consent of instructor. Editor and print shop; practice in picture editing, page makeup, newsflow management and news judgment.

338 Newspaper Typography and Design (4)

Techniques of publishing, including typography, typesetting, photoengraving and printing methods and machines. Background for understanding and supervising design and makeup problems. Lecture 4 hours, outside assignments.

345 Magazine Article Writing (4)

Prerequisite: Basic typing ability. Writing and selling nonfiction articles. Magazine markets studied, queries written, and manuscripts submitted directly to general interest magazines, specialized magazines, trade publications, and Sunday feature sections of newspapers. May be repeated to maximum of 8 units.

391 University Times (3)

Prerequisites: Journalism 330 or consent of instructor. Two one-hour class meetings plus additional supervised activity weekly.

398 Cooperative Education (1-3)

Prerequisites: An overall grade point average of 2.35, upper division standing in the departmental major or minor, and approval by the departmental coordinator prior to registration. Active employment, with regular meetings to discuss student's progress. May be repeated to maximum of 6 units. Graded CR/NC only.

400 History and Philosophy of Mass Media (4)

Prerequisite: Upper division standing. Development of journalism, with an introduction to important papers and personalities. Journalism majors must take this course prior to or concurrently with any 400-level Journalism course.

441 Social Responsibility of Press (4)

Prerequisite: Journalism 400 for Journalism majors; no prerequisite for others. Goals, ideals, responsibilities and major criticisms and defenses of the news-press. Bases for objective and interpretive reporting. Examination of threats to a free flow of news.

454 Selected Topics in Mass Communication (1-4)

Prerequisite: Varies with topic; see *Schedule of Classes* for specific prerequisite. Selected topics of current importance in mass communications field. Subject matter varies with new developments. May be repeated to maximum of 12 units.

460 Industrial Magazine Publishing (4)

Prerequisite: Journalism 330. Planning, layout, editing, and business management of the company or small magazine, stressing format, writing and production of articles, makeup and illustration. Includes laboratory work in various techniques and outside assignments.

464 High School Journalism (4)

Theory of advising school newspaper and yearbook staffs. Relation of staff assignments to classroom instruction. Designed for credential candidates in English and other fields who may supervise school publications.

470 Newspaper Management (4)

Analysis of the economy, organization and business operation of newspapers. Circulation, advertising, promotion, production and plant design problems. Practice in simple cost accounting and bookkeeping procedures in newspaper business management. Lecture 4 hours, outside assignments.

471 Newspaper Advertising (4)

Principles of advertising, emphasis on the newspaper as advertising medium. Instruction in preparing pictures, layouts and copy for newspaper use, mat services and available syndicated materials.

475 Advertising Copy and Layout (4)

Prerequisites: Basic typing ability and Journalism 471 or consent of instructor. Practice in planning and writing copy for advertisements. Construction of practical layouts, studies of advertising rates and costs, publication and advertising agency practices and mechanical production for printed media.

491 Law of Mass Media of Communication (4)

Prerequisite: Junior standing. Study of the libel law, of the right of privacy, contempt of court, freedom of the press, copyright, statutory limitations, postal regulations, and the right to print news of public affairs.

492 Radio and Television News Writing (4)

Prerequisites: Basic typing ability, Journalism 201 and senior standing for Journalism majors; consent of instructor for others. Analysis and preparation of local news and commercials, introductions and special news features for radio and television.

493 Editorial and Interpretive Writing (4)

Prerequisites: Basic typing ability and Journalism 201 and senior standing. Interpretation of news events and their background. Study of editorial pages, policy and the forming of public opinion. Writing of informative and argumentative editorials, columns and background-to-the-news features.

494 Reporting of Public Affairs (4)

Prerequisites: Basic typing ability, Journalism 202, and Political Science 403 or 404, or their equivalents and senior standing. Advanced theory and practice in reporting courts, units of local, state and federal government and those private agencies peripheral to government which figure in decisions on public questions.

495 Special Projects in Journalism, Magazine Production (3)

Prerequisites: Upper division standing and consent of instructor. Supervised work on university feature magazine staff. Two one-hour class meetings plus 3 additional hours activity to be arranged weekly. May be repeated for credit. Maximum of 12 units allowed for Journalism 391, or 495, separately or in any combination.

496 Publicity and Public Relations (4)

Prerequisites: Basic typing ability, Journalism 330 or equivalent and upper division standing. Methods, tools and media used in planning and developing company, community and institutional public relations programs. Publicity and promotional techniques; copy preparation, news releases, publications, relations with the press.

497 Public Relations Problems (4)

Prerequisites: Journalism 496 or consent of instructor. Advanced study of public relations as a way of winning recognition and understanding of the public, with analysis of contemporary problems as faced by business organizations or other institutions. Laboratory work in writing and problem-solving techniques and outside assignments.

499 Undergraduate Directed Study (2-3)

Prerequisite: Consent of an instructor to act as sponsor. Project selected in conference with the sponsor before registration, progress meetings held regularly, and a final report submitted. May be repeated for credit.

Latin American Studies

In School of Letters and Science

Latin American Studies is an interdepartmental program which offers students interested in Latin America the opportunity to pursue a major in this field of study leading to the Bachelor of Arts and Master of Arts degrees. The undergraduate program is described below, and the graduate program is described in the *Graduate Programs* section.

The Faculty

Instruction for the Latin American Studies program is provided by members of the faculty from cooperating disciplines in the Schools of Business and Economics, Education, Fine and Applied Arts, and Letters and Science. Coordinator and adviser for the program is Louis DeArmond, Professor of History.

The Undergraduate Program

The Bachelor of Arts degree program in Latin American Studies combines undergraduate study in social, cultural and business fields with a focus on Mexico, Central and South America.

Requirements for the Major

A total of 74 units of lower and upper division courses is required for the major.

Lower Division

Lower division requirements include development of an adequate reading, writing, and speaking competence in Spanish or another Latin American language. This competence may be demonstrated by examination when appropriate. Other desired lower division courses, in addition to those listed below, will be taken as a part of the General Education requirements.

Required Courses (22 units):

In Anthropology:

250 Cultural Anthropology (6)

In Geography:

150 Human Geography (4)

In Spanish:

200ABC Intermediate Spanish (4-4-4)

Upper Division

A total of 52 units in Social Sciences and language is required.

Required Courses (40 units):

In Anthropology:

404 Peoples of South America (4)

408 Peasant Cultures of Middle America (4)

In Geography:

427 Geography of Middle America (4)

428 Geography of South America (4)

In History:

462 Latin America: 1810-1914 (4)

463 Latin America: 1914 to Present (4)

In Latin American Studies:

497 Proseminar: Selected Topics in Latin American Problems (4)

In Political Science:

431 Governments of Latin America (4)

In Spanish:

300A Composition and Grammar (4)

411 Spanish-American Literature I (4)

or

413 Spanish-American Literature II (4)

Elective Courses (12 units):

Four units may be selected from 499 courses in Anthropology, Chicano Studies, Geography, History, Latin American Studies, Philosophy, Political Science, or Spanish. Select from following courses, with approval of adviser. Courses preceded by an asterisk (*) may be selected when topical area is Latin America.

In Art:

446 Art of Latin America (4)

In Chicano Studies:

400 Pre-Columbian Literature of Mexico (4)

444 History of the Chicano People (4)

In Music:

458 Music of Latin America (3)

In Economics:

460 Economic Growth of Underdeveloped Areas (4)

In History:

444A Spain and Portugal to 1700 (4)

444B Spain and Portugal Since 1700 (4)

*450 Special Studies in History (2 or 4)

*451 Special Lectures in History (2 or 4)

461 Latin America: Colonial Period (4)

465 Brazil (4)

466 Mexico (4)

In Latin American Studies:

424 The U.S. and Latin America (4)

495 Special Problems in Latin American Studies (4)

In Philosophy:

433 Latin American Philosophy (4)

In Political Science:

423 Political Dynamics of Latin America (4)

In Spanish:

- 201AB Conversation (2-2)
- 300B Composition and Grammar (4)
- 310 Spanish Civilization (4)
- 315 Spanish-American Civilization (4)
- 411 Spanish-American Literature I (4)
- 413 Spanish-American Literature II (4)
- 417 Spanish-American Short Story (4)
- 421 Mexican Literature of Twentieth Century (4)
- *460 Masters of Hispanic Culture and Thought:
Selected Studies (4)
- 483 Contemporary Spanish-American Novel (4)
- 485 Literature of Argentina and Uruguay (4)

The Credential Program

There currently is no undergraduate program in Latin American Studies which has received approval for examination waiver for the single subject credential in Social Science. Students should consult advisers in the department and in the School of Education.

Courses of Instruction*Upper Division Courses***424 The United States and Latin America (4)**

Prerequisite: One year of college political science or

consent of instructor. Examination and analysis of relations between the United States and Latin American nations; the inter-American system.

495 Special Problems in Latin American Studies (4)

Prerequisite: Consent of instructor. Intensive study of selected areas or special topics in Latin America. May be repeated twice as subject matter changes.

497 Proseminar: Selected Topics in Latin American Problems (4)

Prerequisite: Oral and written command of Spanish or Portuguese. Senior course, required of all Latin American Studies majors. Interdisciplinary study of Latin American problems. Integrates methods from all relevant disciplines.

499 Undergraduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Project selected in conference with the sponsor before registration, progress meetings held regularly, and final report submitted. May be repeated for credit.

Liberal Studies

In School of Letters and Science

The Bachelor of Arts degree in Liberal Studies provides the opportunity for students to design a major which focuses upon understanding one's self, one's cultural heritage, the natural and social world, contemporary issues, and methods of analysis, inquiry, and problem solving. Seminars in the methods of interdisciplinary studies and courses covering varying topics from an interdisciplinary point of view aim to provide integrative learning experiences. The program also draws extensively from courses throughout the University curriculum.

The Liberal Studies major provides an appropriate foundation for professional training in education, librarianship, law, medicine, various fields of public service, and business and industry. Alternatively, with careful selection of electives, students may prepare for graduate study in such areas as American Studies, Education, English and the social sciences.

The Faculty

The faculty for this interdepartmental program is drawn from the cooperating departments, with W. Keith Henning, Associate Professor of Speech Communication, serving as Coordinator.

The Undergraduate Program

The Bachelor of Arts program in Liberal Studies provides students with an opportunity to acquire the insights and the analytical and expressive skills that will enable them to confront future experiences in a rapidly changing world.

Advisement

All students who intend to major in Liberal Studies must confer with a departmental adviser by the end of the first quarter of their junior year in order to devise an official degree program.

Requirements for the Major

The major consists of 72 units, of which 8 are required in Liberal Studies and 64 are selected from the four areas listed below. Courses listed more than once may be taken for credit in one area only.

Certain courses that are prerequisites to courses selected for a Liberal Studies program will meet General Education requirements. However, care is required in selecting General Education courses that serve this purpose. Courses included within the Liberal Studies program for the major cannot be used to fulfill General Education requirements.

Required in Liberal Studies (8 units):

- 301 Interdisciplinary Investigation (4)
- 489 Senior Colloquium (4)

Area I: Cultural Heritage

Select 16 units from no more than two themes listed in Area I. No more than two courses should be selected from any one department.

Liberal Studies 454 may be taken in place of any four units within any one area, as determined by the topic covered, for a total of 8 units.

THEME I-1: THE ANCIENT WORLD

- Art 406, 411
- English 424, 480
- History 400A, 410, 411, 412, 413
- Latin 100ABC
- Philosophy 311
- Political Science 410
- Speech Communication 480

THEME I-2: THE MEDIEVAL ERA

- Art 416
- Drama 462
- English 416, 460
- History 400A, 419, 421, 422, 445
- Latin 100ABC
- Music 370
- Philosophy 312

THEME I-3: THE RENAISSANCE

- Art 436
- Drama 463
- English 417, 418, 461, 463
- French 413
- History 400B, 402, 420, 423
- Music 370
- Philosophy 313
- Sociology 412
- Spanish 414, 418, 424
- Speech Communication 481

THEME I-4: RELIGION

- Anthropology 437
- Art 476
- English 482
- History 480
- Philosophy 238, 415, 460
- Sociology 445

THEME I-5: THE ORIENT

Art 431
 Chinese: any course
 Geography 424, 425
 History 490A, 490B, 494A, 494B, 495A, 495B
 Japanese: any course
 Music 456, 457
 Philosophy 436, 437
 Political Science 439

THEME I-6: AFRICA

Anthropology 413
 Art 481
 History 414A, 414B, 415, 416
 Music 453
 Pan-African Studies 120A, 250AB
 Political Science 436

THEME I-7: LATIN AMERICA

Anthropology 404, 408
 Art 446
 Geography 427, 428
 History 461, 462 463, 466
 Latin American Studies 424
 Music 458
 Political Science 431
 Spanish 100ABC

THEME I-8: UNITED STATES

American Studies 350, 401, 402, 403, 404, 405
 Anthropology 403, 406
 Art 441
 Chicano Studies 444
 Drama 313
 Economics 350
 English 401, 471, 472, 473
 Geography 421
 History 476, 477ABC, 480
 Home Economics 465
 Industrial Studies 200
 Music 450, 451
 Pan-African Studies 251AB, 410
 Philosophy 430
 Political Science 305
 Sociology 444, 448, 460
 Speech Communication 473AB

Area II: The Natural World

Select 16 units from no more than two themes listed in Area II. No more than two courses should be selected from any one department. Liberal Studies 454 may be taken in place of any four units within any one area, as determined by the topic covered, for a total of 8 units.

THEME II-1: NATURAL ENVIRONMENT

Biology 165, 460
 Chemistry 102 and 152, 103 or 153
 Engineering 352
 Geography 160
 Geology 155, 422
 Physics 150 or 155

THEME II-2: THE EARTH IN THE UNIVERSE

Astronomy 151-152
 Biology 361N
 Geography 160
 Geology 152, 422
 History 400C, 402

Mathematics 206, 207
 Philosophy 485
 Physics 102, 103

THEME II-3: MOLECULAR FOUNDATIONS OF LIFE

Biology 103, 415
 Chemistry 102, 103 or 152, 153

THEME II-4: QUANTITATIVE REASONING

Biology 302, or Psychology 302, or Sociology 210AB, or Business 209 or 309
 Mathematics 207, 240AB, 290, 333, 353
 Music 160
 Philosophy 404, 405
 Psychology 430

THEME II-5: HUMANITY IN STRUCTURE OF NATURE

Anthropology 460, 461, 462
 Biology 361N, 415
 Chemistry 102 or 152, 103, or 153
 Geology 152
 Home Economics 250
 Psychology 201, 401, 408, 412AB
 Speech Pathology 462AB

Area III: Creative Dimensions

Select 16 units from no more than two themes listed in Area III. No more than two courses should be selected from any one department. Liberal Studies 454 may be taken in place of any four units within any one area, as determined by the topic covered, for a total of 8 units.

THEME III-1: ESTHETICS AND APPRECIATION OF THE ARTS

Art 351
 Drama 152, 480
 English 225, 441, 451, 481, 482
 Home Economics 409, 466, 467
 Industrial Studies 494, 496
 Music 351, 452, 479
 Philosophy 475
 Physical Education 350, 473
 Recreation 331
 Speech Communication 467

THEME III-2: HOME AND FAMILY

Business 204
 Home Economics 120, or Psychology 326, or Sociology 440
 Home Economics 220, 341, 420, 421, 423, 424, 430, 440, 441
 Psychology 412AB, 418AB

THEME III-3: THE CHILD

Art 400, 410
 Drama 301, 306
 English 430
 Home Economics 220, 416CD, 420, 421, 423
 Music 400, 401, 402
 Physical Education 420
 Psychology 412AB
 Speech Communication 490, 494
 Speech Pathology 456

THEME III-4: CREATIVE USE OF LEISURE

Art 102, 202, 207, 234, 309, 314 or 319, 440
 Drama 141, 142, 143

English 408
Home Economics 301, 360, 461
Industrial Studies 290, 342
Music 219, 230, 243ABC, 304, 310, 325, 327, 343, 426
Physical Education 356m, 379, 460
Recreation 204, 330
Speech Communication 268, *either 267 or 367*

Area IV: The Contemporary Idiom

Select 16 units from no more than two themes listed in Area IV. No more than two courses should be selected from any one department. Liberal Studies 454 may be taken in place of any four units within any one area, as determined by the topic covered, for a total of 8 units.

THEME IV-1: TWENTIETH CENTURY IDEAS

American Studies 403, 404
Anthropology 401
Art 426
Drama 480
English 308, 340, 405, 406, 451, 475, 486
History 477C
Music 372, 451
Philosophy 313, 314, 440, 445
Political Science 411
Psychology 308
Russian 310
Sociology 210AB, 414
Speech Communication 482

THEME IV-2: URBAN LIFE

Biology 361N
Business 202, 205, 301, 304, 338, 342, 461
Chicano Studies 150
Criminal Justice 101
Economics 433, 440
Engineering 352
Health and Safety Studies 456
History 482, 483, 489
Home Economics 321, 441, 460
Pan-African Studies 303AB
Psychology 420, 422, 442, 447
Sociology 422, 430, 472

THEME IV-3: CULTURAL PLURALISM

Anthropology 403, 406, 443
Business 462, 479
Chicano Studies 410AB, 430
Economics 460, 480
English 251
Foreign Languages: any course(s)
Music 452, 453
Pan-African Studies 303AB, 410
Psychology 422, 440
Sociology 448, 460
Speech Communication 489

THEME IV-4: CONSUMER ISSUES

Business 330, 335
Economics 390
Health and Safety Studies 360
Home Economics 101, 341, 430, 440, 444
Industrial Studies 100

THEME IV-5: CURRENT CONFLICTS

Anthropology 439
Business 307
Economics 350, 390
Health and Safety Studies 467, 468
History 415, 492
Pan-African Studies 410
Philosophy 410, 420, 490
Psychology 410AB, 462
Sociology 426, 446, 460

THEME IV-6: ECOLOGY AND SURVIVAL

Anthropology 462
Biology 460
Economics 390, 433, 440
Engineering 352
Geology 422
Health and Safety Studies 467, 468
Psychology 422
Sociology 434

The Credential Program

Preparation for teaching may be incorporated into the major. A diversified major program has been approved by the Commission for Teacher Preparation and Licensing for examination waiver for the multiple subjects credential. Particular requirements and restrictions apply to candidates for teaching; therefore, early consultation with departmental advisers is essential. Students should also contact advisers in the School of Education regarding admission to the credential program.

Courses of Instruction

Lower Division Course

200 Methods and Materials of Library Research (4)

Development of library research skills. Survey and analysis of major categories of research tools and their application to various disciplines.

Upper Division Courses

301 Interdisciplinary Investigation (4)

Techniques of studying phenomena and problems in an interdisciplinary manner; reading and analysis of selected interdisciplinary works.

454 Selected Topics in Liberal Studies (4)

Prerequisite: Upper division standing. Intensive study of selected topic from interdisciplinary perspective; subjects vary. May be repeated once.

489 Senior Colloquium (4)

Prerequisites: Senior standing and approval of Liberal Studies adviser. Interdisciplinary project; individual student inquiry in specific topics.

Mathematics

In School of Letters and Science

The Department of Mathematics offers undergraduate programs leading to the Bachelor of Arts and Bachelor of Science degrees, both with several options which allow preparation for graduate study and professional careers in a variety of directions.

The Master of Science degree program is described in the *Graduate Programs* section.

The Faculty

Professors: Charles L. Clark (Chairperson), John H. DeHardt, Robert J. Diamond, Harry S. Hayashi, Raymond B. Killgrove, Jagdish Prasad.

Associate Professors: Butrus Basmaji, Gerald A. Beer, Paul L. Chabot, Carl E. Gordon, Evelyn Boyd Granville, Neil B. Hindman, Nandlal Jhunhunwala, Richard Katz, Bethumne Vanderburg.

Assistant Professors: Clifford H. Anderson, Wayne W. Bishop, Marshall L. Cates, Richard W. Chamberlain, Thelma M. Chaney, Leonard Deaton, Royce C. Derby, Donald Kiel, Siegfried G. Krapf, Robert L. Meyer, Gordon L. Nipp, Ann Marie Pelot, Robert K. Tamaki, Stewart M. Venit.

The Undergraduate Program

A major in mathematics prepares students to teach in secondary schools, work as research assistants in industry and government, or enter graduate school to prepare for positions on college staffs and superior positions in industry and government. Two baccalaureate degree programs in Mathematics are offered.

The Bachelor of Arts or Bachelor of Science degree may be obtained in four years if adequate preparation has been secured in high school, e.g., algebra (2 years), geometry, trigonometry. Students who have not had this preparation or whose command of these subjects is weak may be advised to strengthen their knowledge before attempting college mathematics.

For either degree a grade point average of 2.0 is required for all upper division courses counted in the major.

Students are advised to take at least 12 quarter units of a foreign language.

Bachelor of Arts Degree

The Bachelor of Arts degree curriculum of 186 units prepares students for positions in government and for graduate work in mathematics.

Requirements for the Major

The major requires a total of 78 units.

Lower Division

Required Courses (30 units):

In Mathematics:

206-09 Calculus I-IV (4-4-4-4)

255 Introduction to Matrix Theory (4)

290 Digital Computer Programming (2)

In Physics:

201-02 General Physics I, II (4-4)

Electives in Related Fields (8 units):

Select from following with approval of adviser and attention to prerequisites:

Biology 302

Business 294, 306, 309, 391, 409, 496A

Chemistry 101, 122

Economics 310, 413

Engineering 201, 204, 209, 326AB

Philosophy 250, 404, 405

Physics 203, 204

Psychology 414, 430, 431

Sociology 390, 410

Upper Division

Required in Mathematics (12 units):

325 Mathematical Notation and Proof (4)

455 Modern Algebra I (4)

465 Advanced Calculus I (4)

Options

Select one of the following options with approval of adviser. Each option includes 28 units of related courses. To meet individual interests, an alternative 28-unit sequence may be planned for the degree without a formal option in consultation with an adviser. This sequence may not include Mathematics 353 or 402AB.

Option in Pure Mathematics

This option is designed to prepare students for graduate work in Mathematics.

Required Courses (16 units):

456 Modern Algebra II (4)

463 Introduction to Complex Analysis (4)

466 Advanced Calculus II (4)

467 Advanced Calculus III (4)*Electives in Mathematics (12 units):*

Select with approval of adviser. The following are strongly recommended.

435 Topology (4)**457 Linear Algebra (4)****Option in Computer Science and Numerical Methods**

This option provides students with basic knowledge of the digital computer and its application in using numerical methods to solve certain types of mathematical problems.

*Required Courses (16 units):***333 Introduction to Computer Science (4)****390 FORTRAN Programming and Numerical Methods (4)****302 Differential Equations for Engineers and Physicists (4)***or***401 Differential Equations (4)****470 Numerical Calculus (4)***or***471 Numerical Calculus (4)***Electives in Mathematics (12 units):*

Select with approval of adviser. The following are strongly recommended.

457 Linear Algebra (4)**472 Linear Programming (4)****Option for Single Subject Credential**

This option is intended for students who are interested in teaching mathematics. A g.p.a. of 2.35 in all mathematics courses is required for recommendation for student teaching.

*Required Courses (12 units):***320 Selected Topics in History of Mathematics (4)****430 Introduction to Modern Geometry (4)***or***432 Higher Geometry (4)****474 Theory of Probability (4)***Electives in Mathematics (16 units):*

Select with approval of adviser. The following is strongly recommended.

446 Theory of Numbers (4)**Option in Statistics**

This option provides training for students who wish to use statistics in an applied area such as actuarial service or data analysis.

*Required Courses (12 units):***474 Theory of Probability (4)****475 Introduction to Mathematical Statistics I (4)****476 Introduction to Mathematical Statistics II (4)***Electives in Mathematics (16 units):*

Select with approval of adviser. The following are strongly recommended.

463 Introduction to Complex Analysis (4)**466 Advanced Calculus II (4)****467 Advanced Calculus III (4)****Bachelor of Science Degree**

The Bachelor of Science degree curriculum of 198 units is designed to prepare students for positions in business, industry, or government, as well as for graduate work in mathematics.

Requirements for the Major

The major requires a total of 98 units.

Lower Division*Required Courses (42 units):**In Mathematics:***206-09 Calculus I-IV (4-4-4-4)****255 Introduction to Matrix Theory (4)****290 Digital Computer Programming (2)***In Physics:***201-05 General Physics I-V (4-4-4-4-4)***Electives (8 units):*

Select from lower division natural science or engineering courses with departmental approval. Students who plan to take the option in Computer Science and Logical Design must include Engineering 204.

Upper Division*Required in Mathematics (16 units):***302 Differential Equations for Engineers and Physicists (4)***or***401 Differential Equations (4)****325 Mathematical Notation and Proof (4)****455 Modern Algebra I (4)****465 Advanced Calculus I (4)****Options**

Select one of the following options, with approval of adviser. Each option includes 32 units of related courses. To meet individual interests, an alternative 32-unit sequence may be planned for the degree without a formal option in consultation with an adviser. This sequence may not include Mathematics 353 or 402AB. With departmental approval, a maximum of 8 units of mathematics electives may be replaced by upper division courses in other fields.

Option in Applied Mathematics

This option is designed to prepare students for graduate work in applied mathematics.

*Required Courses (24 units):***390 FORTRAN Programming and Numerical Methods (4)****403 Partial Differential Equations (4)****410 Vector Analysis (4)***or***467 Advanced Calculus III (4)****463 Introduction to Complex Analysis (4)****470 Numerical Calculus (4)***or***471 Numerical Calculus (4)****472 Linear Programming (4)**

Electives in Mathematics (8 units):

Select with approval of adviser. The following are strongly recommended.

- 411 Tensor Analysis (4)
- 457 Linear Algebra (4)

Option in Computer Science and Logical Design

This option provides students with a basic knowledge of both the hardware and the software of the digital computer.

Required Courses (28 units):**In Mathematics:**

- 333 Introduction to Computer Science (4)
- 390 FORTRAN Programming and Numerical Methods (4)
- 480 Systems Programming (4)
- 482 Programming Languages (4)
- 484 Data Structures (4)

In Engineering:

Select two from following:

- 344 Digital Engineering (4)
- 447 Computer Organization (4)
- 449 Switching Theory and Logical Design (4)

Elective in Mathematics (4 units):

Select with approval of adviser. The following are strongly recommended.

- 302 Differential Equations for Engineers and Physicists (4)
- 457 Linear Algebra (4)
- 470 Numerical Calculus (4)
- 471 Numerical Calculus (4)
- 472 Linear Programming (4)

Option for Single Subject Credential

This option is intended for students who are interested in teaching mathematics. A g.p.a. of 2.35 in all mathematics courses is required for recommendation for student teaching.

Required Courses (12 units):

- 320 Selected Topics in History of Mathematics (4)
- 430 Introduction to Modern Geometry (4)

or

- 432 Higher Geometry (4)
- 474 Theory of Probability (4)

Electives in Mathematics (20 units):

Select with approval of adviser. The following is strongly recommended:

- 446 Theory of Numbers (4)

Minor in Mathematics

The minor in Mathematics is available for students majoring in another field. It consists of 32 units, of which 12 are in upper division. Students majoring in fields which require the same courses as those required for the minor in Mathematics will need to take only those courses in the minor program which are not incorporated into their major. However they must complete the state-mandated minimum of 18 units exclusive of the major, of which at least 9 must be in upper division courses.

Lower Division**Required in Mathematics (20 units):**

- 206-09 Calculus I-IV (4-4-4-4)
- 255 Introduction to Matrix Theory (4)

Upper Division**Electives in Mathematics (12 units):**

Select three upper division courses other than 353 and 402AB with approval of adviser.

The Credential Program

The Bachelor of Arts and Bachelor of Science degree programs in Mathematics have been approved by the Commission for Teacher Preparation and Licensing for examination waiver for the single subject credential in Mathematics. Although one option for the B.A. was especially designed to prepare students for careers in teaching, all programs for both degrees have waiver approval as of the publication deadline of this catalog. Students should consult advisers in the department and the School of Education.

Courses of Instruction**Lower Division Courses****101 Intermediate Algebra (4)**

Prerequisite: One year of high school algebra. Fundamental skills necessary for mathematics beyond arithmetic. Basic topics in algebra, including multiplication, division, and factorization of polynomials; solutions of equations, including systems of equations, functions, exponents, logarithms and progressions.

102 College Algebra (4)

Prerequisite: Mathematics 101 or equivalent with minimum grade of C, or satisfactory score on placement examination. *The prerequisite must have been completed within last three years.* Logarithmic and exponential functions, elementary theory of equations, permutations and selections, binomial theorem, mathematical induction and inequalities.

103 Algebra and Trigonometry (4)

Prerequisite: Mathematics 101 or 102 or equivalent with minimum grade of C, or satisfactory score on placement examination. *The prerequisite must have been completed within last three years.* Elementary topics from linear algebra, including systems of linear equations, determinants and matrices; trigonometric functions, identities, and equations; solution of triangles; inverse trigonometric functions and complex numbers.

120A Elementary Mathematics for Teachers (4)

Prerequisite: Passing score on placement examination. Understanding and appreciation of fundamentals of arithmetic and algebra with some attention to historical aspects.

120B Elementary Mathematics for Teachers (2)

Prerequisite: Mathematics 120A with minimum grade of C. Selected topics from elementary geometry, units of measurement, areas, volumes, approximate numbers, square roots.

154 Special Topics in Mathematics (1-6)

Prerequisites: As needed for specific topic. Current topics of special interest in mathematics. Subject to be announced in *Schedule of Classes*. May be repeated to maximum of 6 units.

206 Calculus I: Differentiation (4)

Prerequisites: Mathematics 102 and 103 with minimum grade of C, or satisfactory score on placement examination. Functions, graphs, conics, limits, continuity and derivatives, anti-differentiation, and applications.

207 Calculus II: Integration (4)

Prerequisite: Mathematics 206 with minimum grade of C. The definite integral, Fundamental Theorem of the Calculus, transcendental functions, methods of integration, applications to physics and biology.

208 Calculus III: Sequences, Series, and Coordinate Systems (4)

Prerequisite: Mathematics 207 with minimum grade of C. Limits of sequences and series, indeterminate forms, Taylor Series, plane coordinate systems and change of coordinates.

209 Calculus IV: Several Variables (4)

Prerequisite: Mathematics 208 with minimum grade of C. Three-dimensional analytic geometry, partial differentiation, multiple integration, spherical and cylindrical coordinate systems, improper integrals.

240AB Introductory Mathematical Analysis for Business (4-2)

Prerequisite: Mathematics 101 or 102 or equivalent with minimum grade of C, or satisfactory score on placement examination. Analytic geometry of conic sections and algebraic curves, differential calculus of algebraic functions with applications, integral calculus with applications.

254 Selected Topics in Mathematics (1-6)

Prerequisite: As needed for specific topic. Current topics of special interest to students in mathematics. Subject to be announced in *Schedule of Classes*. May be repeated for credit.

255 Introduction to Matrix Theory (4)

Prerequisite: Mathematics 207. Vector spaces, linear transformations, linear equations, matrices, determinants, eigenvectors and eigenvalues, canonical forms.

274 Introduction to Statistics (4)

Prerequisite: Mathematics 101. Statistical terms; interpretation of statistical data with and without use of probability, random sampling, confidence limits and hypothesis tests.

290 Digital Computer Programming (2)

Prerequisites: Mathematics 101 and a statistics course, or 102. Organization of digital computer and associated peripheral equipment, FORTRAN programming, and program-logic techniques.

Upper Division Courses**302 Differential Equations for Engineers and Physicists (4)**

Prerequisite: Mathematics 209. Ordinary differential equations, simultaneous ordinary differential equations, linear independence and Wronskians, power series solutions, Fourier series; emphasis on applications in science and engineering. Credit not awarded for both Mathematics 302 and 401.

320 Selected Topics in History of Mathematics (4)

Prerequisite: Mathematics 207 (may be taken concurrently). Traces development of fundamental concepts and techniques in fields of algebra, geometry, trigonometry and calculus.

325 Mathematical Notation and Proof (4)

Prerequisite: Mathematics 206. Elementary set theory and number theory with emphasis on notation and types of proof. Axiomatic methods, equivalence relations, ϵ - δ arguments.

333 Introduction to Computer Science (4)

Prerequisite: Mathematics 290. History and general background of computation. Number bases, applied algebra, and applied logic. Machine and assembly language.

353 Finite Mathematics with Applications to Behavioral Sciences (4)

Prerequisite: High school algebra. Introduction to elementary logic, combinatorial problems, probability, expected values, matrices, Markov chains, linear programming and applications. Designed for students not majoring in mathematics; no credit for mathematics majors or minors.

390 FORTRAN Programming and Numerical Methods (4)

Prerequisites: Mathematics 207 and 290. Advanced FORTRAN programming, elementary error analysis, and algorithms from numerical analysis, including the Newton-Raphson and the Gauss-Seidel methods.

401 Differential Equations (4)

Prerequisite: Mathematics 209. Ordinary differential equations with emphasis on existence and uniqueness of solutions. Credit not awarded for both Mathematics 302 and 401.

402A Advanced Mathematics I for Engineers and Physicists (4)

Prerequisite: Mathematics 302 or 401. Vector analysis to include line and surface integrals, orthogonal curvilinear coordinates, complex variables to include contour integration and conformal mapping, Laplace transformation.

402B Advanced Mathematics II for Engineers and Physicists (4)

Prerequisite: Mathematics 402A. Implicit functions and Jacobians, infinite series and integrals, differentiation of integrals, Taylor series for several variables, Fourier se-

ries and boundary value problems, special functions (Bessel, Legendre, error, elliptic), calculus of variations.

403 Partial Differential Equations (4)

Prerequisite: Mathematics 302 or 401. Orthogonal sets of functions, Fourier series and integrals, with applications to the equations of mathematical physics; first order equations, Cauchy's method of characteristics.

405 Laplace Transform (4)

Prerequisite: Mathematics 466 or equivalent. The Laplace transform, use in solving linear ordinary and partial differential equations, solution of boundary value problems, applications to transient electrical and dynamic phenomena.

410 Vector Analysis (4)

Prerequisite: Mathematics 209. Vector algebra and calculus, vector fields, gradient, divergence, curl, divergence theorem, Stokes' theorem, applications to geometry and mathematical physics.

411 Tensor Analysis (4)

Prerequisite: Mathematics 410. Contravariant and covariant vectors and tensors, tensor algebra. Riemannian geometry, the metric tensor, geodesics, Christoffel symbols, derivatives of tensors, physical components of tensors. Applications to mechanics and differential geometry.

420 Foundations of Mathematics (4)

Prerequisite: Mathematics 325. Sets, relations, and functions. The statement calculus, the predicate calculus and the deduction of valid consequences.

430 Introduction to Modern Geometry (4)

Prerequisite: Mathematics 208. Study of some of synthetic geometry developed since time of Euclid; brief survey of non-Euclidean geometry.

431 Differential Geometry (4)

Prerequisite: Mathematics 209. Introduction to theory of curves and surfaces, including Frenet-Serret formulas for curves, Gaussian and mean curvature for surfaces, theorems of Euler and Meusnier. Additional topics as time permits.

432 Higher Geometry (4)

Prerequisite: Mathematics 208. Homogeneous projective coordinates, invariants, duality, Desargues' and Pappus' theorems, transformations, synthetic and analytic treatment of conics.

435 Topology (4)

Prerequisite: Mathematics 325. Introduction to point set topology, including continuity, product spaces, compactness, Tychonoff theorem, connectedness, metric spaces, and Urysohn lemma.

446 Theory of Numbers (4)

Prerequisites: Mathematics 325 and upper division standing. Divisibility, Euclidean algorithm, prime numbers, fundamental theorem of arithmetic, distribution of primes, congruences, Fermat-Euler and Wilson theorems, residues and quadratic reciprocity law, Bernoulli numbers, quadratic forms, Diophantine equations.

454 Advanced Topics in Mathematics (1-6)

Prerequisite: As needed for specific topic. Current topics of interest to students in mathematics. Subject topics announced in *Schedule of Classes*. May be repeated for credit.

455 Modern Algebra I (4)

Prerequisites: Mathematics 325 and 255. Groups and rings, including normal subgroups, quotient groups, ideals, quotient rings, group and ring homomorphisms and isomorphisms.

456 Modern Algebra II (4)

Prerequisite: Mathematics 455. Additional topics in groups and rings, field extensions, modules.

457 Linear Algebra (4)

Prerequisite: Mathematics 455. Vector spaces over arbitrary fields, special types of linear transformations, eigenvalues and eigenvectors, canonical forms, scalar product spaces.

463 Introduction to Complex Analysis (4)

Prerequisite: Mathematics 466. Complex variables, analytic functions, complex integration, conformal mapping, applications.

465 Advanced Calculus I (4)

Prerequisites: Mathematics 209 and 325. Real number system; topology of $\mathbb{R}^n$ including compactness and completeness; sequences and series, including limit inferior and limit superior continuity.

466 Advanced Calculus II (4)

Prerequisite: Mathematics 465. Differentiation and integration of function of a real variable; sequences of functions.

467 Advanced Calculus III (4)

Prerequisites: Mathematics 255 and 465. Functions of several variables; partial derivatives; generalized chain rule; inverse and implicit function theorems; line and surface integrals.

470 Numerical Calculus (4)

Prerequisites: Mathematics 209 and 390. Interpolation, elementary approximation theory, numerical differentiation and integration.

471 Numerical Calculus (4)

Prerequisites: Mathematics 302 or 401 and 390. Numerical solution of ordinary and partial differential equations; numerical solution of linear algebraic equations.

472 Linear Programming (4)

Prerequisite: Mathematics 255. Geometric solutions, simplex method, transportation problem, elementary game theory.

474 Theory of Probability (4)

Prerequisite: Mathematics 209. General probability spaces, random variables, joint distributions, random sampling, law of large numbers, estimation of parameters.

475 Introduction to Mathematical Statistics (4)

Prerequisite: Mathematics 474. Estimation and tests of hypothesis.

476 Introduction to Mathematical Statistics II (4)

Prerequisites: Mathematics 325 and 475. Statistical hypothesis tests; parametric and nonparametric methods, including linear models; decision theory with emphasis on Bayes solutions.

480 Systems Programming (4)

Prerequisite: Mathematics 333. Use and implementation of assemblers, macro-processors, compilers, loaders, and operating systems.

482 Programming Languages (4)

Prerequisite: Mathematics 333 or equivalent back-

ground in programming. Survey of selected computer languages; emphasis on underlying structure and types of problems for each language.

484 Data Structure (4)

Prerequisites: Mathematics 333 and 455. Directed graphs, strings, and lists. Use of arrays, trees, and list structures in storing information in computer. List and string processing languages.

490 Proseminar in Mathematics (2-5)

Prerequisites: Consent of instructor and senior standing. Study of one phase of mathematics, such as set theory, mathematical logic, algebraic geometry, statistical methods, etc. May be repeated as subject matter changes.

499 Undergraduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as a sponsor. Project selected in conference with sponsor before registration; progress meetings held regularly, and a final report submitted. May be repeated for credit.

Microbiology and Public Health

In School of Letters and Science

The Department of Microbiology and Public Health offers the Bachelor of Arts degree in Microbiology and Bachelor of Science degrees in Medical Technology and Environmental Health Science. Students holding degrees in Microbiology or Medical Technology may qualify for entrance to medical or dental schools by including appropriate elective courses in their programs.

The department also offers the Master of Science degree in Microbiology, described in the *Graduate Programs* section.

The Faculty

Professor: Joseph T. Seto

Associate Professors: Kenneth L. Anderson (Chairperson), Elizabeth Tamblyn.

Assistant Professors: Leland Chan, Richard W. Flemming, Archie C. Shum.

Bachelor of Arts Degree

The Bachelor of Arts degree with a major in Microbiology, provides adequate basic training in microbiology and such related fields as chemistry to qualify students for (1) graduate study in the field or various types of federal employment; (2) civil service employment, particularly as a public health microbiologist; (3) microbiological work in such industrial fields as the pharmaceuticals, brewing, industrial fermentations and the dairy industry; (4) work as a hospital microbiologist, or (5) positions as research technicians in various university research projects.

Requirements for the Major

A total of 186 units is required, of which 112 units are in the major. Students planning to become public health microbiologists are advised to add Biology 103 and 485.

Lower Division

Required Courses (58 units):

In Microbiology:

200AB General Microbiology (5-3)

In Biology:

101 Biology of Animals (5)

102 Biology of Plants (5)

In Chemistry:

101-03 General Chemistry I, II, III (5-5-5)

201 Quantitative Analysis (5)

In Mathematics:

102 College Algebra (4)

103 Algebra and Trigonometry (4)

In Physics:

101-03 Physics I, II, III (4-4-4)

Upper Division

Required in Microbiology (28 units):

301 General Medical Microbiology (3)

302 Pathogenic Bacteriology (6)

304 Immunology and Serology (5)

305 Microbiological Methods for Public Health (3)

331 Structure and Function of Bacteria (3)

401 General Virology (3)

430 Bacterial Physiology (3)

433 Bacterial Physiology Laboratory (2)

Required in Chemistry (26 units):

301ABC Organic Chemistry (3-3-3)

302AB Organic Chemistry Laboratory (2-2)

431ABC Biochemistry (3-3-3)

432AB Biochemistry Laboratory (2-2)

The Credential Program

The Bachelor of Arts degree program in Microbiology has not been submitted for single subject credential approval. Students seeking this credential in Life Science should consult the Department of Biology for appropriate programs.

Bachelor of Science Degrees

The Bachelor of Science degree programs provide opportunities for students to obtain academic instruction needed to qualify graduates for positions as registered medical technologists or registered sanitarians. Separate programs are offered as preparation for each of these fields.

Bachelor of Science Degree in Medical Technology

The program has been approved for training of medical laboratory technologists. Upon completion of this major, plus the required training in an affiliated hospital laboratory, students are eligible to take the examination to become a Registered Medical Technologist. This certification generally is required for employment in hospitals, public health laboratories, and certain private, state and federal research laboratories.

Requirements for the Major

A total of 192 units is required for the degree, of which 117–125 units are in the major.

Lower Division

Required Courses (61 units):

In Microbiology:

200AB General Microbiology (5-3)

In Biology:

101 Biology of Animals (5)

102 Biology of Plants (5)

103 Concepts of Biology (3)

In Chemistry:

101–3 General Chemistry I, II, III (5-5-5)

201 Quantitative Analysis (5)

In Mathematics:

102 College Algebra (4)

103 Algebra and Trigonometry (4)

In Physics:

101–03 Physics I, II, III (4-4-4)

Upper Division

Required in Microbiology (17 units):

301 General Medical Microbiology (3)

302 Pathogenic Bacteriology (6)

304 Immunology and Serology (5)

320 Hematology (3)

Required in Chemistry (27 units):

301ABC Organic Chemistry (3-3-3)

302AB Organic Chemistry Laboratory (2-2)

431ABC Biochemistry (3-3-3)

432A Biochemistry Laboratory (2)

433 Clinical Biochemistry (3)

Electives (12–20 units):

Select from following with approval of adviser.

In Microbiology:

305 Microbiological Methods (3)

331 Structure and Function of Bacteria (3)

340 Medical Mycology (3)

401 General Virology (3)

402 Virology Laboratory (2)

430 Bacterial Physiology (3)

433 Bacterial Physiology Laboratory (2)

440 Systematic Bacteriology (3)

In Biology:

200AB Human Anatomy and Physiology (5-5)

302 Biometrics (4)

415 General Genetics (4)

485 Medical Parasitology (5)

In Public Health:

401 Food Plant Sanitation (4)

412 Introduction to Epidemiology (4)

Bachelor of Science Degree in Environmental Health Science

The program in Environmental Health Science was developed with assistance from the Los Angeles City and County Health Departments and meets provisions of the California State Health and Safety Code. Completion of the program qualifies students for the Registered Sanitarian

(R.S.) examination, which generally is required for employment as a sanitarian in city, county, or state health departments, and in certain federal agencies. Many large industries now employ registered sanitarians in their industrial health programs.

Requirements for the Major

A total of 192 units is required for the degree of which 103–110 are in the major.

Lower Division

Required Courses (60 units):

In Microbiology:

200AB General Microbiology (5-3)

In Biology:

101 Biology of Animals (5)

102 Biology of Plants (5)

103 Concepts of Biology (3)

In Chemistry:

101–03 General Chemistry I, II, III (5-5-5)

208A Bio-organic Chemistry (4)

In Mathematics:

102 College Algebra (4)

103 Algebra and Trigonometry (4)

In Physics:

101–03 Physics I, II, III (4-4-4)

Electives in Chemistry (0–8 units):

208BC Bio-organic Chemistry II, III (4-4)

Upper Division

Required Courses (35 units):

In Public Health:

305 Public Health Microbiology (4)

310 Physical Principles of Sanitation (4)

311 Environmental Sanitation Control (3)

401 Food Plant Sanitation (4)

412 Introduction to Epidemiology (4)

413 Public Health Administration (4)

415 Vital Statistics (4)

In Biology:

473 Applied Entomology (4)

In Physics:

402N Radiation Biophysics (4)

Electives (0–15 units):

Select from following with approval of adviser.

In Biology:

460 General Ecology (4)

482 Medical Entomology (4)

485 Medical Parasitology (5)

In Microbiology:

301 General Medical Microbiology (4)

302 Pathogenic Bacteriology (6)

340 Medical Mycology (3)

401 General Virology (3)

425 Soil Microbiology (4)

In Public Health:

314 Introduction to Public Health (4)

Courses in Microbiology

Lower Division Courses

150 Principles of Microbiology (4)

Microorganisms, their nature, distribution, interrelations; principles related to disease, immunity, fermentation and genetics. Credit will not be given for 150 following any other college course in microbiology. Laboratory when facilities available.

200AB General Microbiology (5-3)

Prerequisites: Biology 101–102 or Biology 200AB; Chemistry 101–102 or 151–152; Chemistry 153 recommended. Basic principles of microbiology. Emphasizes nature, distribution, physiological activities of microorganisms; applied microbiology; medical aspects. For majors in microbiology and related subjects. 200A; lecture 3 hours, laboratory 6 hours; 200B; lecture 2 hours, laboratory 3 hours.

Upper Division Courses

301 General Medical Microbiology (3)

Prerequisite: Microbiology 200AB. Infection and resistance, host-parasite interaction, chemotherapy, diagnostic serology, and anaerobic microbiology. Lecture 2 hours, laboratory 3 hours.

302 Pathogenic Bacteriology (6)

Prerequisite: Microbiology 200AB. Bacteriology, pathology, and immunology of infectious bacterial diseases of man and animals; diagnostic procedures for identification of major pathogens. Lecture 4 hours, laboratory 6 hours.

304 Immunology and Serology (5)

Prerequisites: Microbiology 301 and 302; Chemistry 301A and 302A (may be taken concurrently). Fundamentals of immunology and serology, laboratory production of antigens and antisera, serological tests commonly used for detection of disease. Lecture 3 hours, laboratory 6 hours.

305 Microbiological Methods for Public Health (3)

Prerequisites: Microbiology 301 and 302. Standard laboratory methods for examination of water, sewage, milk, and foods; air sampling procedures. Credit not allowed for both Microbiology 305 and Public Health 305. Lecture 2 hours, laboratory 3 hours.

320 Hematology (3)

Prerequisite: A grade of C or better in Biology 103. Basic principles of hematology, experience in making complete blood counts, hemoglobin determinations, blood grouping, and other related procedures. Lecture 2 hours, laboratory 3 hours.

331 Structure and Function of Bacteria (3)

Prerequisites: Microbiology 200AB; Chemistry 301A, 302A (may be taken concurrently). Function of bacteria, with emphasis on structure and growth.

340 Medical Mycology (3)

Prerequisite: Microbiology 200AB Introduction to pathogenic fungi commonly responsible for mycotic infections of man. Lecture 2 hours, laboratory 3 hours.

401 General Virology (3)

Prerequisites: Microbiology 301 and 302. or consent of instructor. Basic principles of virology; emphasizes properties, classification, multiplication, genetics, and viral-host interactions of bacterial, animal and plant viruses.

402 Virology Laboratory (2)

Prerequisites: Microbiology 301 and 302. Methods of isolation, cultivation, and identification of animal and bacterial viruses. Course to follow or accompany Microbiology 401. Laboratory 6 hours.

425 Soil Microbiology (4)

Prerequisites: Microbiology 200AB and Chemistry 208A or 301A, or consent of instructor. Microflora and microfauna of the soil, their importance in economy of nature; characteristics and activities of major physiological groups; laboratory techniques involved; practical considerations. Lecture 3 hours, laboratory 3 hours.

430 Bacterial Physiology (3)

Prerequisites: Microbiology 331; Chemistry 431A, 432A; concurrent enrollment in Chemistry 431B and 432B. Bacterial physiology with emphasis on biochemical events related to cellular differentiation and basic bacterial biochemical pathways.

433 Bacterial Physiology Laboratory (2)

Prerequisite: Concurrent enrollment in Microbiology 430. Experimental work to accompany Microbiology 430. Laboratory 6 hours.

499 Undergraduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Project selected in conference with sponsor before registration; progress meetings held regularly and a final report submitted. May be repeated for credit.

Courses in Public Health

Upper Division Courses

305 Public Health Microbiology (4)

Prerequisite: Microbiology 200AB or equivalent. Sanitary and laboratory applications of microbiology, considering particularly waterborne diseases, water testing and treatment, sewage disposal, milk testing, food testing, restaurant and air sanitation. Credit not allowed for both Public Health 305 and Microbiology 305. Lecture 3 hours, laboratory 3 hours.

310 Physical Principles of Sanitation (4)

Prerequisites: Mathematics 102 and 103 or equivalent. Techniques in general sanitation, covering construction and maintenance of water facilities, filters, sewage disposal, heating, ventilation, lighting, plumbing and air pollution control.

311 Environmental Sanitation Control (3)

Prerequisite: Public Health 305. Insect, rodent, and nuisance control; sanitation problems related to food and housing.

314 Introduction to Public Health (4)

Prerequisite: Microbiology 200AB. Philosophy and scope of public health science, application based on social characteristics, patterns of health and disease, preventive and control measures, community health education, rehabilitation, related problems.

401 Food Plant Sanitation (4)

Prerequisite: Microbiology 200AB and/or Chemistry 208AB or consent of instructor. Microbiological problems involved in food plant sanitation, food contamination, and food spoilage. Lecture 3 hours, laboratory 3 hours.

412 Introduction to Epidemiology (4)

Prerequisite: Microbiology 200AB. Epidemiology of communicable diseases including modes of transportation and methods of control of communicable disease.

413 Public Health Administration (4)

Prerequisite: Microbiology 200AB or consent of instructor, and Political Science 150. Agencies dealing with sanitation; organization of health departments, office procedures, laws and legal regulations, and public relations.

415 Vital Statistics (4)

Prerequisite: Public Health 412 or consent of instructor. Vital registration systems; accumulation, summarization, and application of data in planning programs and solving major community problems, including study and control of chronic diseases. Lecture 3 hours, laboratory 3 hours.

496 Supervised Field Training (1-4)

Prerequisites: Upper division standing in Environmental Health Science; Public Health 310, 311 and 413; consent of instructor and acceptance by agency. Selected students are assigned to an environmental management bureau of the Los Angeles County Health Department. Observation, participation, written reports, and evaluation conferences.

Music

School of Fine and Applied Arts

The Department of Music offers programs leading to the Bachelor of Music, Bachelor of Arts and Master of Arts degrees. Many opportunities are provided for creative performance activities, both for majors and for students pursuing personal development in music along with career preparation in other fields.

The Master of Arts degree program is described in the *Graduate Programs* section.

The Faculty

Professors: Francis H. Baxter, Winifred Knox Chastek, Robert M. Fowells, Celeste Griffith, Louis A. Hansen, Charles M. Hubbard (Chairperson), Ellen King Kravitz, Vernon F. Leidig, Hugh E. Mullins, Robert W. Runge, Patty W. Schliestett, Inez R. Schubert, Keith D. Snyder, Milton Stern, Vito G. Susca, Maryo Van Deman.

Associate Professors: Henry R. Jackson, Byong-Kon Kim, J. Zebulon King, Robert Strassburg.

Assistant Professors: William H. Hill, Mona Paulee, Olga Termini, Don Lee White.

Composer in Residence: Roy E. Harris.

The Undergraduate Program

The undergraduate programs in Music are designed to provide students with a broad, general foundation in the theoretical branches of music, competence in artistic performance, and professional preparation for successful graduate study. The Bachelor of Music degree stresses instrumental, keyboard, or vocal performance. The Bachelor of Arts degree serves students whose primary interest is music history, theory, and literature, and those who wish to teach music or to achieve a liberal arts education with an emphasis in music.

Students who wish to major in music are required to declare upon entrance, with the approval of the department chairman or designee, a performance specialization (voice, piano, or other principal instruments), to develop this performance ability, and to appear in at least one student solo or ensemble recital each year.

All students majoring in music must demonstrate progress in their major performing area before a faculty jury at the end of each quarter. Those not making satisfactory progress are asked to take additional work. Students must present a satisfactory senior recital before being approved for graduation.

Participation in one of the large performance organizations (choir, chorus, symphony orchestra, or symphonic band) is required each quarter for all music majors. Other ensembles such as Chamber Singers, Brass Choir, Woodwind Ensemble, String Ensemble, Men's Glee, and Opera Repertory should also be taken and are credited toward the elective program for music majors. The na-

ture of these groups makes it essential that they maintain a constant personnel.

Students demonstrating competence in excess of minimum requirements in performance and theory may earn advanced standing. Lower division students may register for and earn credit in upper division performance courses.

Bachelor of Music Degree

The Bachelor of Music degree curriculum is designed to provide professional training for serious, talented musicians seeking preparation for careers as performers. Students interested in qualifying for entrance into this program are required to audition before the faculty committee for their performance area, and must show potential for professional development as performing musicians. As soon as possible after acceptance, students are assigned to faculty advisers for guidance in planning course work.

Lower division studies build a foundation of musicianship in the following fields: theory (including sight singing, ear training, harmony, counterpoint, composition, and analysis and form) and music literature (including study of composition styles and performance practices in several periods of music history). In addition, foundations will be built for the development of technical competence in performance.

Upper division studies concentrate on further development of musicianship through individual and group performance, and advanced music theory and literature appropriate to the performance area. Recitals are required at various levels throughout the program.

Requirements for the Major

A total of 198 units is required, of which 105 are in the major.

Core Program

All students complete a required core program of 44 units in Music.

Lower Division

Required in Music (16 units):

170AB Music Literature (2-2)

260ABC Music Theory I, II, III (4-4-4)

Students must demonstrate basic proficiency in piano skills before enrollment in 260A, or take Music 243ABC.

Upper Division

Required in Music (28 units):

360ABC Theory IV, V, VI (3-3-3)

362 Orchestration and Arranging (4)

370-372 History of Music in Western Civilization I, II, III (4-4-4)

380 Beginning Conducting (3)

Options in Music

Students select one of three options. The first option emphasizes keyboard performance for piano, organ, or harpsichord; the second emphasizes instrumental performance in solos, small ensembles, bands, or orchestras; the third prepares students for solo and group vocal performance.

Option I: Keyboard Performance (Piano, Organ, or Harpsichord)

A total of 51-54 units is required in this option, which prepares students for solo performance independently, in small ensembles, and with orchestral accompaniment. Students study repertoire analytically, memorize the literature and prepare repertoire for recital programs. Prior to graduation students prepare and successfully perform a 50-minute recital of solo works from the Baroque, Classic, Romantic, and Contemporary Periods.

Required in Music (10 units):

460 Composition (3)

465 Contemporary Techniques (4)

475 History and Literature of Keyboard Music (3)

Preparation for Senior Recital (18 units):

Courses are repeatable, with specified limitations; see course descriptions.

Select from performance specialty area:

145, 245, 345, 445 Piano (1-1-2-2)

or

146, 246, 346, 446 Organ (1-1-2-2)

Performing Organization (8-10 units):

Courses are repeatable, with specified limitations; see course descriptions.

Select from following:

320 Symphonic Band (2)

321 Symphonic Orchestra (2)

326 A Cappella Choir (2)

327 Chorus (2)

447 Accompanying (2)

Electives in Music (16 units):

Select from upper division courses, with approval of adviser.

Option II: Instrumental Performance

A total of 54 units is required in this option, which prepares students for performance in small ensembles and in band or orchestra. Students study the preparation of repertoire and recital programs. Prior to graduation, students prepare and successfully perform a 50-minute recital of solo works from a minimum of three historical periods, normally including Classic, Romantic, and Contemporary.

Required in Music (6 units):

481 Instrumental Conducting (3)

473 History and Literature of Symphonic Music (3)
or

474 History and Literature of Chamber Music (3)

Preparation for Senior Recital (18 units):

Courses are repeatable, with specific limitations; see course descriptions.

Select from performance specialty area:

115, 215, 315, 415 Strings (1-1-2-2)

116, 216, 316, 416 Woodwinds (1-1-2-2)

117, 217, 317, 417 Brass (1-1-2-2)

118, 218, 318, 418 Percussion (1-1-2-2)

Performance Area

Select courses from each area below, appropriate to instrument of specialization, for a total of 30 units. These courses are repeatable within limits specified in course descriptions.

Instrumental Courses (9 units):

410s, w, b Orchestral Instruments (3-3-3)

Performing Organization (12 units):

320 Symphonic Band (2)

321 Symphonic Orchestra (2)

Ensemble Courses (9 units):

420 String Ensemble (1)

421 Woodwind Ensemble (1)

422 Brass Ensemble (1)

423 Percussion Ensemble (1)

424 Stage Band (1)

Option III: Vocal Performance

A total of 54 units is required in this option, which prepares students to perform as soloists in choral groups, to perform art songs in the style and manner of the period in which they were written, to demonstrate awareness of poetic song content by translation from at least two foreign languages, and to prepare repertoire and recital programs. Prior to graduation students prepare and successfully perform a 50-minute recital of songs from at least four of the following historical periods: Renaissance, Baroque, Classic, Romantic, Contemporary.

Required in Music (24 units):

Music 425 and 436 are repeatable with limitations; see course descriptions.

245 Piano Instruction (1)

- 406 Comparative Vocal Techniques (3)
- 425 Chamber Singers (1)
- 426 Opera Repertory, Performance, and Production (2)
- 436 Foreign Language Diction for Singers (2)
- 461 Choral Arranging (3)
- 480 Choral Conducting (3)
- 471 History and Literature of Large Vocal Forms (3)
or
- 472 History and Literature of Vocal Solo Music (3)
- Preparation for Senior Recital (18 units):*
Courses are repeatable, with specified limitations; see course descriptions.
135, 235, 335, 435 Voice (1-1-2-2)
- Performing Organization (12 units):*
Courses are repeatable, with specified limitations; see course descriptions.
326 A Cappella Choir (2)
- 327 Chorus (2)

Bachelor of Arts Degree

The Bachelor of Arts degree curriculum emphasizes history, theory, and literature of music, with a foundation in performance. Included are courses in keyboard, instrumental and vocal performance, and conducting, with opportunity for development in one performance area as required for the senior recital. For students interested in pursuing a career in teaching, the Bachelor of Arts program must be completed along with the Additional Requirements for the Single Subject Credential.

Requirements for the Degree

The Bachelor of Arts degree requires a total of 186 units, of which a minimum of 75 is in the major. An additional 11-12 units is required for students interested in the single subject credential.

Lower Division

Required in Music Theory (12 units):

260ABC Music Theory I, II, III (4-4-4)

Students must demonstrate basic proficiency in piano skills before enrollment in 260A, or take Music 243ABC.

Electives in Music Literature (0-4 units):

170AB Music Literature (2-2)

Upper Division

Required in Music Theory (13 units):

360ABC Music Theory IV, V, VI (3-3-3)

362 Orchestration and Arranging (4)

Required in Music History (12 units):

370-372 History of Music in Western Civilization I, II, III (4-4-4)

Electives in Music (34-38 units):

With approval of adviser, select courses in each of the following groups:

Conducting

Select 3 or 6 units from following:

380 Beginning Conducting (3)

480 Choral Conducting (3)

481 Instrumental Conducting (3)

Vocal Principles

330 Principles of Vocal Development (2)

331 Applied Vocal Development (1)

Performing Organization

Select 8 or 10 units from following:

320 Symphonic Band (2)

321 Symphonic Orchestra (2)

326 A Cappella Choir (2)

327 Chorus (2)

For the following areas of study either lower or upper division courses may be required, depending on proficiency.

Instrumental Courses

Select 6 to 12 units from following:

211bp, s, w Orchestral Instruments (3-3-3)

312b, p, s, w Orchestral Instruments (3-3-3-3)

Preparation for Senior Recital

Select 4-5 units from following:

115, 215, 315, 415 String (1-1-1-1)

116, 216, 316, 416 Woodwinds (1-1-1-1)

117, 217, 317, 417 Brass (1-1-1-1)

118, 218, 318, 418 Percussion (1-1-1-1)

135, 235, 335, 435 Voice (1-1-1-1)

145, 245, 345, 445 Piano (1-1-1-1)

146, 246, 346, 446 Organ (1-1-1-1)

Other Electives

Select a minimum of 5 units from following:

314 Instrumental Music Laboratory (1)

344 Functional Piano for Teachers (2)

407 Practicum in Instrumental Techniques (3)

408 Analysis of Choral Literature and Performance (3)

Any theory, history, performance or ensemble at the 300 or 400 level not included above.

Additional Requirements for Single Subject Credential

In addition to the Bachelor of Arts degree program, the following courses are required for the credential, are prerequisite to directed teaching in music, and may be taken either for elective credit for the degree outside the major, or in post-baccalaureate standing.

Required in Music (8-9 units):

344 Functional Piano for Teachers (2)

401 Music Literature for Children (3)

408 Analysis of Choral Literature (3)

or

409 Analysis of Instrumental Literature (4)

Required in Secondary Education (3 units):

421Mu Methods of Teaching General Music (3)

Minor in Music

A minor in Music is available for students majoring in other fields. A minimum of 41 units is required.

Required in Music (17 units):

260ABC Music Theory I, II, III (4-4-4)

344 Functional Piano for Teachers (2)

380 Beginning Conducting (3)

Piano Instruction (2 units):

Select from following:

343 Class Piano Instruction (1)

145, 245, 345, 445 Piano (1-1-1-1)

Voice Instruction (3 units):

Select from following:

230 Elementary Voice Instruction (2)

330 Principles of Vocal Development (2)

331 Applied Vocal Development (1)

135, 235 Voice (1-1)

Instrumental Course (3 units):

Select from following:

211s, w, bp Orchestral Instruments (3-3-3)

312s, w, b, p Orchestral Instruments (3-3-3-3)

Performing Organization (2 units):

Select from following:

320 Symphonic Band (2)

321 Symphonic Orchestra (2)

326 A Cappella Choir (2)

327 Chorus (2)

Music Literature (12 units):

Select from following:

351 Understanding Music Literature (4)

370-372 History of Music in Western Civilization I, II, III (4-4-4)

Repertoire Courses (2 units):

Select from a single performance area:

115, 215, 315, 415 Strings (1-1-1-1)

116, 216, 316, 416 Woodwinds (1-1-1-1)

117, 217, 317, 417 Brass (1-1-1-1)

118, 218, 318, 418 Percussion (1-1-1-1)

135, 235, 335, 435 Voice (1-1-1-1)

145, 245, 345, 445 Piano (1-1-1-1)

146, 246, 346, 446 Organ (1-1-1-1)

The Credential Program

The Bachelor of Arts degree program in Music along with the Additional Requirements for the Single Subject Credential is intended for examination waiver for the single subject credential in Music. Students should consult advisers in both the Department of Music and in the School of Education.

Courses of Instruction

Lower Division Courses

115 Strings (1)

Instruction in technique and repertoire for students of violin, viola, cello, bass, classical guitar, and harp. May be repeated to maximum of 3 units.

116 Woodwinds (1)

Instruction in technique and repertoire for students of flute, oboe, bassoon, clarinet, saxophone, and recorder. May be repeated to maximum of 3 units.

117 Brass (1)

Instruction in technique and repertoire for students of trumpet, French horn, trombone, baritone, and tuba. May be repeated to maximum of 3 units.

118 Percussion (1)

Instruction in technique and repertoire for students of snare drum, mallet instruments, multiple percussion, and timpani. May be repeated to maximum of 3 units.

135 Voice (1)

Principles and techniques of singing. Development of song repertoire. May be repeated to maximum of 3 units.

145 Piano (1)

Prerequisite: Consent of piano faculty by audition. Instruction in development of piano technique and repertoire. Performance in a public recital is expected. May be repeated to maximum of 3 units.

146 Organ (1)

Instruction in technique and repertoire. May be repeated to maximum of 3 units.

150 Music in World Culture (4)

Cultural role of music within broad humanities framework of visual arts, literature, history, and philosophy.

160 Music Fundamentals (3)

Analysis and training in basic techniques of music.

161 Solfeggio (1)

Prerequisite: Music 160 or equivalent. Application of techniques of singing musical material at sight. May be repeated to maximum of 3 units.

170AB Music Literature (2-2)

170A: Representative music literature from Middle Ages through Classical Period.

170B: Representative music literature from Romantic Period to present.

211 Orchestral Instruments (3 each)

211s String

211w Woodwind

211bp Brass and Percussion

Class instruction in theory and performance of orchestral instruments; ensemble experience provided. Designed for all music majors and minors except those with an instrumental focus. Meets 4 hours weekly.

215 Strings (1)

Prerequisite: Music 115 or jury examination or consent of instructor. Instruction in technique and repertoire for students of violin, viola, cello, bass, classical guitar, and harp. May be repeated to maximum of 3 units.

216 Woodwinds (1)

Prerequisite: Music 116 or jury examination or consent of instructor. Instruction in technique and repertoire for students of flute, oboe, clarinet, bassoon, saxophone, and recorder. May be repeated to maximum of 3 units.

217 Brass (1)

Prerequisite: Music 117 or jury examination or consent of instructor. Instruction in technique and repertoire for students of trumpet, French horn, trombone or baritone, and tuba. May be repeated to maximum of 3 units.

218 Percussion (1)

Prerequisite: Music 118 or jury examination or consent of instructor. Instruction in technique and repertoire for students of snare drums, mallet instruments, multiple percussion, and timpani. May be repeated to maximum of 3 units.

219 American Folk Music and Guitar (2)

Interpretation of American folk music through study of guitar techniques and style. Student must furnish own guitar. Meets 3 hours weekly. May be repeated to maximum of 6 units.

230 Elementary Voice Instruction (2)

Primarily for students not majoring in music. Technique of voice production, study of song interpretation, emphasis upon recreational singing, some attention to elementary musicianship and remedial problems. Meets 4 hours weekly. May be repeated to maximum of 6 units.

235 Voice (1)

Prerequisite: Music 135 or jury examination or consent of instructor. Principles and techniques of singing. Development of song repertoire. May be repeated to maximum of 3 units.

243ABC Class Piano Instruction (1-1-1)

Basic piano techniques, including scales, arpeggios and studies, primary chords, transposition, sight-reading, ear training, and study of appropriate piano literature. Activity 2 hours.

245 Piano (1)

Prerequisite: Music 145 or consent of piano faculty by audition. Instruction in development of piano technique and repertoire. Performance in a public recital is expected. May be repeated to maximum of 3 units.

246 Organ (1)

Prerequisite: Music 146 or jury examination or consent of instructor. Instruction in technique and repertoire. May be repeated to maximum of 3 units.

247 Organ Instruction (2)

Prerequisites: Piano background and consent of instructor. Class instruction in technique and repertoire of organ playing. Meets 4 hours weekly. May be repeated to maximum of 6 units.

260ABC Music Theory I, II, III (4-4-4)

Prerequisites: Music 160 and 243AB or equivalent. Integrated approach to music theory: sight singing, rhythmic problems, essentials of harmony, counterpoint, form and keyboard experience emphasized. Meets 5 hours weekly.

Upper Division Courses**304 Music in Recreation (3)**

Designed for recreational leaders; participation in varied music experiences of recreation program, development of selected skills, study of materials and techniques for group leadership and program planning. Meets 4 hours weekly.

310 Recorder (2)

Class instruction in techniques and performance of the recorder, development of music reading skills and suitable repertoire. Student must furnish own instrument. Meets 3 hours weekly. May be repeated to maximum of 6 units.

312 Orchestral Instruments (3)

- 312s Strings
- 312w Woodwind
- 312b Brass
- 312p Percussion

Prerequisites: Music 260ABC or equivalent. Development of performance proficiencies on orchestral instruments; fundamental and advanced procedures and materials; knowledge of fingering and acoustical principles. Designed for majors with instrumental focus. Meets 4 hours weekly.

314 Instrumental Music Laboratory (1)

Prerequisites: Two courses in instruments, to include one in woodwind, brass, or percussion and one in strings; both may be taken concurrently. Basic band and orchestra laboratory experience with emphasis on literature suitable for use in schools. Open to students in other major programs. Meets 2 hours weekly. May be repeated to maximum of 6 units.

315 Strings (1 or 2)

Prerequisite: Music 215 or jury examination or consent of instructor. Instruction in technique and repertoire for students of violin, viola, cello, bass, classical guitar, and harp. Students preparing for B.A. enroll for 1 unit; may be repeated to maximum of 3 units. Students preparing for B.M. enroll for 2 units; may be repeated to maximum of 6 units.

316 Woodwinds (1 or 2)

Prerequisite: Music 216 or jury examination or consent of instructor. Instruction in technique and repertoire for students of flute, oboe, clarinet, bassoon, saxophone, and recorder. Students preparing for B.A. enroll for 1 unit; may be repeated to maximum of 3 units. Students preparing for B.M. enroll for 2 units; may be repeated to maximum of 6 units.

317 Brass (1 or 2)

Prerequisite: Music 217 or jury examination or consent of instructor. Instruction in technique and repertoire for students of trumpet, French horn, trombone, baritone, and tuba. Students preparing for B.A. enroll for 1 unit; may be repeated to maximum of 3 units. Students preparing for B.M. enroll for 2 units; may be repeated to maximum of 6 units.

318 Percussion (1 or 2)

Prerequisite: Music 218 or jury examination or consent of instructor. Instruction in technique and repertoire for students of snare drum, mallet instruments, multiple percussion, and timpani. Students preparing for B.A. enroll for 1 unit; may be repeated to maximum of 3 units. Students preparing for B.M. enroll for 2 units; may be repeated to maximum of 6 units.

320 Symphonic Band (2)

Prerequisite: Consent of instructor. Preparation and performance of standard and contemporary literature of the symphonic band. Meets minimum of 4 hours weekly, 60 hours during quarter. May be repeated to maximum of 12 units.

321 Symphonic Orchestra (2)

Prerequisite: Consent of instructor. Preparation and performance of standard and contemporary literature of the symphonic orchestra. Meets minimum of 4 hours weekly, 60 hours during quarter. May be repeated to maximum of 12 units.

325 Men's Glee Club (1)

Open to all men students; experience in singing men's choral literature. Meets minimum of 3 hours weekly. May be repeated to maximum of 12 units.

326 A Cappella Choir (2)

Prerequisite: Consent of instructor through audition. Preparation and public performance of standard choral literature and contemporary choral works. Concerts to be given on and off campus. Meets minimum of 4 hours weekly, 60 hours during quarter. May be repeated to maximum of 12 units.

327 Chorus (2)

Preparation and performance of standard choral literature, primarily in large forms, with accompaniment. Meets minimum of 4 hours weekly, 60 hours during quarter. May be repeated to maximum of 12 units.

330 Principles of Vocal Development (2)

Prerequisites: Music 230 or one year of choral experience, or consent of instructor; must be taken concurrently with Music 331. *Open to music majors and minors only.* Principles of correct vocal production and development through lecture and demonstration. May be repeated to maximum of 4 units.

331 Applied Vocal Development (1)

Prerequisites: Music 230 or one year of choral experience, or consent of instructor; must be taken concurrently with Music 330. *Open to music majors and minors only.* Laboratory experience in solo singing. Analysis by class members and instructor. May be repeated to maximum of 4 units.

335 Voice (1 or 2)

Prerequisite: Music 235 or jury examination or consent of instructor. Principles and techniques of singing. Development of song repertoire. Students preparing for B.A. enroll for 1 unit; may be repeated to maximum of 3 units. Students preparing for B.M. enroll for 2 units; may be repeated to maximum of 6 units.

343 Class Piano Instruction (1)

Prerequisite: Music 243C or equivalent. Continuation of technical development from previous study. Emphasis on piano repertoire for individual student development. Activity 2 hours. May be repeated to maximum of 3 units.

344 Functional Piano for Teachers (2)

Prerequisites: Music 260ABC and 343; acceptable performance on placement examination or consent of instructor. Development of keyboard competency by application of principles of musicianship, including harmonization, transposition, improvisation, score reading, playing by ear, and directing from the piano. Activity 4 hours. May be repeated to maximum of 4 units.

345 Piano (1 or 2)

Prerequisite: Music 245 or consent of piano faculty by audition. Instruction in development of piano technique and repertoire. Performance in a public recital is expected. Students preparing for B.A. enroll for 1 unit; may be repeated to maximum of 3 units. Students preparing for B.M. enroll for 2 units; may be repeated to maximum of 6 units.

346 Organ (1 or 2)

Prerequisite: Music 246 or jury examination or consent of instructor. Instruction in technique and repertoire. Students preparing for B.A. enroll for 1 unit; may be repeated to maximum of 3 units. Students preparing for B.M. enroll for 2 units; may be repeated to maximum of 6 units.

351 Understanding Music Literature (4)

Development of understanding and enjoyment of music through study of its fundamentals, history and literature; emphasis on awareness and evaluation of music in our lives. Required attendance at selected concerts.

360ABC Music Theory IV, V, VI (3-3-3)

Prerequisite: Music 260C or equivalent. Continued study of materials of music using more complex forms and more difficult techniques and styles. Writing emphasis on student's performing medium.

361 Arranging (3)

Prerequisite: Music 260C or equivalent. Writing and arranging for beginning and intermediate vocal and instrumental groups including problems in arranging for the unchanged and changing voice and unusual instrumental combinations.

362 Orchestration and Arranging (4)

Prerequisite: Music 260C or equivalent; prior completion of Music 211 or 312 recommended. Theory of writing for instrumental ensembles, study of orchestral scores and an introduction to symphonic orchestration.

370 History of Music in Western Civilization I (4)

Prerequisite: One year of music theory or equivalent for B.A. candidate; 170AB and one year of music theory or equivalent for B.M. candidate. Survey of music in general culture emphasizing evolution of musical style and practice from Middle Ages through Renaissance periods.

371 History of Music in Western Civilization II (4)

Prerequisite: One year of music theory or equivalent for B.A. candidate; 170AB and one year of music theory or equivalent for B.M. candidate. Survey of music in general culture emphasizing evolution of musical style and practice from Baroque through Classical periods.

372 History of Music in Western Civilization III (4)

Prerequisite: One year of music theory or equivalent for B.A. candidate; 170AB and one year of music theory or equivalent for B.M. candidate. Survey of music in general culture emphasizing evolution of musical style and practice from Romantic period to present.

380 Beginning Conducting (3)

Prerequisite: Music 260C or equivalent. Elements of baton techniques, interpretation, score reading and rehearsal techniques utilizing suitable choral and instrumental literature. Meets 4 hours weekly.

400 Development of Perception in Musical Arts (4)

Perceptual, expressive, historical, and cultural components associated with musical-esthetic phenomena. Lecture, demonstration, and field trips. Meets 5 hours weekly. Lecture 3 hours, activity 2 hours.

401 Music Literature for Children (3)

Prerequisite: Music 400 or Secondary Education 421Mu. Development of a repertoire for children, including songs and guided listening.

402 Workshop in Elementary Music Education (3)

Prerequisite: Music 400, Secondary Education 421Mu, or consent of instructor. Survey of elementary music materials and demonstrations of techniques for making them meaningful to teachers. May be repeated to maximum of 9 units.

403 Training Select Children's Choirs (3)

Prerequisites: Music 380, 330 and 331, or consent of instructor. Choral techniques as applied to children with vocal ability or interest prior to and during voice change. Laboratory experiences with demonstration choirs. Meets 4 hours weekly.

404 Acoustical Analysis of Instrument Construction (3)

Prerequisite: Music 312b, s, w, or equivalent. Physical and acoustical principles of musical instrument construction with laboratory experience in evaluation and maintenance of instruments. Meets 4 hours weekly.

405 Piano Methods and Materials (3)

Prerequisite: Consent of instructor. Practical procedures for teaching piano, from pre-school child to adult level, methods and materials for group and individual teaching.

406 Comparative Vocal Techniques (3)

Prerequisite: Consent of instructor. Comparative analysis of theories of vocal production as applied to the child voice, changing voice, and mature voice; study of the literature for each category.

407 Practicum in Instrumental Techniques (3)

Prerequisite: Knowledge of orchestral instruments. Symposium on comparison of ideas and practices relevant to instrumental techniques. Observation and participation in laboratory provided. Lecture 2 hours, activity 2 hours.

408 Analysis of Choral Literature and Performance (3)

Prerequisites: Music 330, 331, 344, 360C and 480. Period, style, form and other technical aspects of literature suitable for various types of vocal ensembles and analysis of performance problems. Lecture 2 hours, activity 2 hours.

409 Analysis of Instrumental Literature and Performance (4)

Prerequisites: Music 344 and 407 or equivalents. Leadership and technical aspects of performance, and selection of music literature suitable for various types of instrumental ensembles. Lecture 3 hours, activity 2 hours.

410 Orchestral Instruments (3)

- 410s String
- 410w Woodwind
- 410b Brass

Prerequisites: Music 312s, w, b, or equivalent or consent of instructor. Advanced class instruction on orchestral instruments with emphasis on theory of tone production and analysis of literature. Meets 4 hours weekly. Each of sections (410s, w, or b) may be repeated to maximum of 9 units. Different instrument studied each time course is repeated.

415 Strings (1 or 2)

Prerequisite: Music 315 or jury examination or consent of instructor. Instruction in technique and repertoire for students of violin, cello, bass, classical guitar, and harp. Students preparing for B.A. enroll for 1 unit; may be repeated to maximum of 3 units. Students preparing for B.M. enroll for 2 units; may be repeated to maximum of 6 units.

416 Woodwinds (1 or 2)

Prerequisite: Music 316 or jury examination or consent of instructor. Instruction in technique and repertoire for students of flute, oboe, clarinet, bassoon, saxophone, and recorder. Students preparing for B.A. enroll for 1 unit; may be repeated to maximum of 3 units. Students preparing for B.M. enroll for 2 units; may be repeated to maximum of 6 units.

417 Brass (1 or 2)

Prerequisite: Music 317 or jury examination or consent of instructor. Instruction in technique and repertoire for students of trumpet, French horn, trombone, baritone, or tuba. Students preparing for B.A. enroll for 1 unit; may be repeated to maximum of 3 units. Students preparing for B.M. enroll for 2 units; may be repeated to maximum of 6 units.

418 Percussion (1 or 2)

Prerequisite: Music 318 or jury examination or consent of instructor. Instruction in technique and repertoire for students of snare drum, mallet instruments, multiple percussion, and timpani. Students preparing for B.A. enroll for 1 unit; may be repeated to maximum of 3 units. Students preparing for B.M. enroll for 2 units; may be repeated to maximum of 6 units.

420 String Ensemble (1)

Prerequisite: Consent of instructor. Rehearsal and performance of standard ensemble literature including quartets, quintets, sextets, and larger works. Meets minimum of 3 hours weekly. May be repeated to maximum of 12 units.

421 Woodwind Ensemble (1)

Prerequisite: Consent of instructor. Rehearsal and performance of standard ensemble literature including quartets, quintets, sextets, and larger works. Meets minimum of 3 hours weekly. May be repeated to maximum of 12 units.

422 Brass Ensemble (1)

Prerequisite: Consent of instructor. Rehearsal and performance of standard ensemble literature including quartets, quintets, sextets, and larger works. Meets minimum of 3 hours weekly. May be repeated to maximum of 12 units.

423 Percussion Ensemble (1)

Prerequisite: Consent of instructor. Rehearsal and performance of standard ensemble literature including quartets, quintets, sextets, and larger works. Meets minimum of 3 hours weekly. May be repeated to maximum of 12 units.

424 Stage Band (1)

Prerequisite: Consent of instructor. Rehearsal and performance of standard commercial orchestra literature including original and published arrangements for dance bands, radio and television orchestras, and motion picture orchestras. Meets minimum of 3 hours weekly. May be repeated to maximum of 12 units.

425 Chamber Singers (1)

Prerequisite: Consent of instructor. Admission by audition; open to all qualified students. Choral music from 15th century to present with special attention to madrigals; music of all styles for choral ensemble of twenty or less. Concerts on and off campus. Meets minimum of 3 hours weekly. May be repeated to maximum of 12 units.

426 Opera Repertory, Performance and Production (2)

Prerequisite: Consent of instructor. Performance of excerpts and complete works in concert versions and/or full stage productions. Meets minimum of 3 hours weekly. May be repeated to maximum of 12 units.

435 Voice (1 or 2)

Prerequisite: Music 335 or jury examination or consent of instructor. Principles and techniques of singing. Development of song repertoire. Students preparing for B.A. enroll for 1 unit; may be repeated to maximum of 3 units. Students preparing for B.M. enroll for 2 units; may be repeated to maximum of 6 units.

436 Foreign Language Diction for Singers (2)

Prerequisite: Consent of instructor. Italian, German, French vocal texts in original language; phonetic pronunciation, comprehension through lectures, listening, speaking and translation techniques; emphasis on one language each quarter. See *Schedule of Classes* for lan-

guage emphasis. Lecture 2 hours, laboratory 1 hour. May be repeated to maximum of 6 units.

445 Piano (1 or 2)

Prerequisite: Music 345 or consent of piano faculty by audition. Instruction in development of piano technique and repertoire. Performance in a public recital is expected. Students preparing for B.A. enroll for 1 unit; may be repeated to maximum of 3 units. Students preparing for B.M. enroll for 2 units; may be repeated to maximum of 6 units.

446 Organ (1 or 2)

Prerequisite: Music 346 or jury examination or consent of instructor. Instruction in technique and repertoire. Students preparing for B.A. enroll for 1 unit; may be repeated to maximum of 3 units. Students preparing for B.M. enroll for 2 units; may be repeated to maximum of 6 units.

447 Accompanying (2)

Prerequisite: Consent of instructor. Training in performance styles of different periods and combinations of performers and in the specific tasks of accompanying. Practical experience through guided performance with vocalists and instrumentalists. Meets 4 hours weekly. May be repeated to maximum of 6 units.

450 History of American Music (4)

Prerequisite: Music 150 or 351 or American Studies 401. Historical survey of music in the United States from early colonial times to present.

451 Contemporary American Music (4)

Prerequisite: Music 150 or 351 or equivalent, or American Studies 401, or consent of instructor. Approaches to understanding and enjoyment of twentieth century music.

452 History of Jazz (4)

Prerequisite: Music 150 or 351 or equivalent, or American Studies 401. Nature and processes of jazz with concentration on its historical background and development in the United States.

453 Folk and Traditional Music of the Western World (3)

Prerequisite: Music 150 or 351 or equivalent. Traditional and folk music of Europe, sub-Saharan Africa and the Americas.

456 Folk and Traditional Music of the Eastern World (3)

Prerequisite: Music 150 or 351 or equivalent. Traditional and folk music of Asia, Near East, Middle East and the Pacific.

457 Music of China, Korea, and Japan (4)

Prerequisites: Consent of instructor and upper division standing in music or program with emphasis on Asian culture. Development of music of China, Korea, and Japan, from earliest period to present.

458 Music of Latin America (3)

Prerequisite: Music 150 or 351 or equivalent. Development of understanding of and appreciation for music of Latin America; examination of representative works from folk and art music of the 20 republics.

460 Composition (3)

Prerequisites: Music 360C and 362 or equivalents. Writing for small instrumental and/or vocal ensembles. May be repeated to maximum of 9 units.

461 Choral Arranging (3)

Prerequisite: Music 360C or equivalent. Writing and arranging for vocal groups, problems in arranging for the usual school groups, creative arranging in smaller vocal forms.

462 Advanced Orchestration and Arranging (3)

Prerequisite: Music 362 or equivalent. Survey of techniques necessary for orchestrating compositions for symphonic band and symphonic orchestra; special attention given to problems encountered in public school bands and orchestras.

463 Counterpoint (3)

Prerequisite: Music 260C or equivalent. Eighteenth century contrapuntal techniques, including some work in the species; invertible counterpoint, motive development, two- and three-part invention and the fugue.

464 Musical Form (3)

Prerequisite: Music 260C or equivalent. Analytic techniques for study of balance in organization of musical material.

465 Contemporary Techniques (4)

Prerequisite: Music 360C or equivalent. Techniques used in contemporary composition.

466 Commercial Orchestration (3)

Prerequisites: Music 360C and 362 or equivalents. Various styles of orchestration used in commercial music, and practical writing experience.

467 Music Composition for Television and Films (3)

Prerequisites: Music 360C and 362 or equivalents. Techniques used in composing music for television and film productions; practical writing experience.

468 Music Composition for the Theater (3)

Prerequisites: Music 360C and 362 or equivalents. Original composition for theater developed through study of historical background of music in theater and its growth into Broadway musical.

469 Techniques of Electronic Music (3)

Prerequisites: Music 360C and at least one quarter of Music 460. Composing for electronic media: recording, synthesis, notation, sound resources. Study of esthetics of composition for electronic sounds. Lecture 2 hours, activity 2 hours.

470 History and Literature of Opera (3)

Prerequisites: Music 370, 371, and 372 or equivalents. Historical survey of opera from its beginnings to present day. Selected works from various periods used for comparative stylistic analysis.

471 History and Literature of Large Vocal Forms (3)

Prerequisites: Music 370, 371, and 372 or equivalents. Study of large vocal works from Baroque period to present. Discussion and analysis of representative works.

472 History and Literature of Vocal Solo Music (3)

Prerequisites: Music 370, 371, 372 or equivalents. Vocal solo literature from Baroque period to present; presentation and analysis of representative art songs.

473 History and Literature of Symphonic Music (3)

Prerequisites: Music 370, 371, and 372. Analysis of orchestral literature from pre-classic period to present.

474 History and Literature of Chamber Music (3)

Prerequisites: Music 370, 371, and 372. Analysis of instrumental chamber music from Renaissance period to present.

475 History and Literature of Keyboard Music (3)

Prerequisites: Music 370, 371, and 372, or equivalents. Survey of piano literature, changes in keyboard technique and style; representative masterpieces analyzed and performed.

478 Collegium Musicum I (1)

Prerequisites: Music 370, 371, and 372, or consent of instructor. Study and performance of interesting vocal and instrumental ensemble music of different style periods with emphasis on historically correct performance practices. Meets 2 hours weekly.

479 Music Criticism (3)

Prerequisites: Music 370, 371, and 372. Approaches to critical listening for various musical factors; comparison of performance practices and styles; experience in evaluating and writing reports and critiques of live and recorded performances.

480 Choral Conducting (3)

Prerequisite: Music 380. Application of basic conducting techniques to problems of choral conducting. Meets 4 hours weekly.

481 Instrumental Conducting (3)

Prerequisite: Music 380; Music 312 recommended. Experience offered in transposition, score reading, baton technique and interpretation of symphonic literature; recognition of psychologically sound rehearsal procedure. Experience conducting rehearsal orchestra is integral part of course. Meets 4 hours weekly.

482 Rehearsal Techniques for Band Directors (4)

Prerequisites: Music 312b, w, p and experience in the field or consent of instructor. Systematic examination of specific rehearsal techniques applicable to amateur performers in school situations. Includes rehearsal preparation and literature for marching and symphonic bands.

490 Music for Early Childhood (4)

Prerequisite: Home Economics 320, Educational Foundations 413, Psychology 412A or consent of instructor. Music activities suitable for the young child. Includes five field trips for observation of children in preschool or kindergarten and primary situations. May not be used in lieu of Music 400.

491 Special Studies in Music (1-4)

Prerequisites: Consent of instructor; courses related to specific content offered. Intensive study in particular area of music, as announced in *Schedule of Classes*. May

be repeated to maximum of 9 units as subject matter changes.

492 Musical Creativity for Children (4)

Use of Orff-Schulwerk method to develop creativity in children through singing, movement, instruments, language. Lecture 3 hours, activity 2 hours.

497 Research Techniques in Music (2)

Basic bibliography, survey of literature, methods of research in music and music education, and practice in organizing and reporting data, both oral and written.

499 Undergraduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Project selected in conference with sponsor before registration; progress meetings held regularly, and a final report submitted. May be repeated for credit.

Nursing

In School of Fine and Applied Arts

The Nursing curriculum prepares nurses for professional careers in the maintenance and promotion of health, and in supportive, preventive, therapeutic and restorative nursing care, for individuals and families in institutional and community settings. Students who complete the undergraduate program will have acquired knowledge and skills specific to advanced nursing practice, and will be qualified to assume intermediate leadership functions in an area of nursing specialization.

Students interested in undertaking graduate study leading to a Master of Science degree are referred to the *Graduate Programs* section.

The Faculty

Professors: Esther Walker Buccieri, Marlene Farrell, Dorothy Johnson, Eloise M. King, Wanda L. King, Sister Eugene Teresa McCarthy, Barbara Sinclair, Ruth R. Wu (Chairperson).

Associate Professors: Donna C. Aguilera, Marlohn Balas, Henry Etta Blackmon, Miriam M. Blomquist, Sarah Farnham, Marilyn Friedman, Jo Ann Johnson, Marilyn A. Lemon, Merle Mishel, Freda V. O'Bannon, Helen O'Connell, Julia Ory, Bonnie G. Steele, S. Winifred Utz, Diane Vernon.

Assistant Professors: Martha J. Barnes, Beverly R. Bigler, Felicitas de la Cruz, Molly McDonald, Eileen M. McLachlan, Leota McNall, Irene Molloy, Judith Papenhausen, Harriett Sprouse, DeAnn Young.

Clinical Associates: Geneva Clymer, Irene Forsman, Elizabeth Hefferin, Herlinda Jackson, Ann Kaiser, Joan King, Mary K. Kleinknecht, Bonnie Norman, Leasel Omer, Lula Mae Rodgers.

The Undergraduate Program

The professional Nursing curriculum leading to the Bachelor of Science degree with a major in Nursing is four academic years in length. Students who wish to attend year-round can complete their requirements in less than four years.

Effective January 1, 1975, students who have successfully completed the 300-level Nursing courses and earned a total of 135 quarter units are eligible to take the state examination for Registered Nurse licensure.

The undergraduate Nursing program is accredited by the State Board of Nurse Education and Nurse Registration and the National League for Nursing. Some courses are open to non-majors who may find one or more courses helpful in achieving their own professional or personal goals.

Admission to the Program

The program consists of lower and upper division segments. Students admitted to Cal State L.A. as freshmen or lower division transfer students are enrolled in the lower division portion of the program. Students who transfer from community colleges with an Associate in Arts degree in

Nursing and the R.N., or from N.L.N.-accredited hospital diploma schools are admitted to the upper division program. This professional program is designed for students who have completed the technical nursing courses in accredited colleges and universities, including California State University, Los Angeles.

General Information

Students in the Nursing program must carry malpractice insurance. Low-cost insurance is available through the Student Nurses Association of California and the California Nurses Association (for Registered Nurses). Nursing students must also have a valid California driver's license and access to the use of an automobile.

Information regarding uniforms may be obtained from departmental advisers.

Departmental Regulations

Students in the Nursing major must maintain good academic standing and attain grades of C or better in all Nursing courses and in all science courses prerequisite or corequisite to Nursing. To meet this requirement of continuing satisfactory performance, students placed on academic probation are not permitted to enroll in a Nurs-

ing course until the probation has been removed. Nursing courses for which students earn less than a C grade may be repeated only once, and only with consent of instructor.

Students may not enroll in any course which requires other courses in Nursing unless the prerequisite courses are completed with grades of C or better.

Students seeking a second baccalaureate degree with a major in Nursing must maintain a minimum 2.0 grade point average in courses taken in the second degree program.

Requirements for the Major

A total of 198 units is required for the Bachelor of Science degree in Nursing, of which 104–109 units (exclusive of required General Education courses) are in required or selected courses in Nursing and related fields. The program consists of a lower division core, an upper division core, and a senior option. Three options are offered: the first emphasizes nursing of the acutely ill; the second emphasizes primary care nursing; the third emphasizes mental health services for individuals and groups.

The General Education requirement in health is waived for students who graduate with a major in Nursing, but the unit requirement in General Education must be met through electives.

Required in General Education (42 units):

The following courses, which fulfill science and social science area requirements of the General Education program, are prerequisite to Nursing courses. Some may be taken concurrently, as indicated below in Nursing course descriptions.

In Biology:

200AB Human Anatomy and Physiology (5-5)

In Chemistry:

101–02 General Chemistry I–II (5-5)

or

151–52 Fundamentals of Chemistry I–II (5-5)

In Microbiology:

200AB General Microbiology (5-3)

Students entering with 4–5 semester units of credit for a community college course including laboratory satisfy this requirement by transfer credit.

In Anthropology:

250 Cultural Anthropology (6)

In Psychology:

150 Human Behavior (4)

In Sociology:

201 Introductory Sociology (4)

Lower Division

Required in Nursing (36 units):

160 Behavioral Responses to Illness and Disability I (2)

161 Nursing Process Laboratory I (4)

170 Health Assessment I (2)

171 Health Assessment Laboratory I (4)

190 Introduction to Nursing (2)

260 Health Deviations I (4)

261 Medical Therapeutics Laboratory I (4)

262 Health Deviations II (4)

263 Medical Therapeutics Laboratory II (4)

270 Health Assessment II (2)

271 Health Assessment Laboratory II (4)

Required in Home Economics (3 units):

211 Fundamentals of Human Nutrition (3)

Upper Division

Required in Nursing (25 units):

360 Behavioral Responses to Illness and Disability II (4)

361 Nursing Process Laboratory II (4)

362 Behavioral Responses to Pain, Cognitive and Sensory Disturbances (4)

363 Nursing Process Laboratory III (4)

365 Laboratory in Multidisciplinary Approaches to Health Problems (2)

370 Family Health Assessment (2)

371 Family Health Assessment Lab (1)

380 Team Dynamics in Nursing (2)

392 Problems and Trends in Health Care Systems (2)

Required in Anthropology:

444 Medical Anthropology (4)

Option (36–41 units):

Students select one of the following options for professional preparation in Nursing. Students who prefer advanced study in general nursing practice may earn the degree without an option, for which they must select 400-level courses in Nursing and appropriate electives in related fields, with approval of adviser.

Option in Acute Care Nursing

This option is designed to prepare nurses in advanced techniques and principles used in the care of the critically ill, in hospitals and in specialized outpatient facilities. A total of 41 units is required.

Required in Nursing (22 units):

400 Nursing Care in Acute Cardiorespiratory Illness (4)

402 Cardiac Arrhythmia Detection (2)

404 Nursing Care in Acute Neurometabolic Crises (2)

Select *one* from following:

406 Traumatic Injuries (2)

408 Critical Care of Neonates (2)

Select *three* from the following:

401 Medical Intensive Care Lab (4)

403 Postsurgical Intensive Care Lab (4)

405 Laboratory in Selected Areas of Physiological Crisis (4)

407 Neonatal Intensive Care Unit Lab (4)

Required in Related Fields (11 units):

In Biology:

486N Advanced Topics in Cardiovascular Physiology (3)

487N Advanced Topics in Regulation of Body Fluids and Electrolytes (3)

In Chemistry:

153 Fundamentals of Chemistry III (Biochemistry) (5)

Electives in Related Fields (8 units):

Select from following:

In Physics/Engineering:

- 351N Introductory Medical Physics and Instrumentation (4)

In Psychology:

- 201 Physiological Psychology (4)
 412AB Psychology of Human Development: Childhood and Adolescence (4-4)
 462 Psychology of Human Development: Maturity and Aging (4)
Students may select only 412A, 412B or 462.

In Nursing:

- 462 Behavior Modification in Health Care (4)

Option in Primary Care Nursing

This option is designed to prepare nurses in advanced techniques and principles used in health assessment and maintenance for children, adults, and pregnant women. A total of 36–40 units is required.

Required in Nursing (22 units):

- 410 Health Assessment and Maintenance of Aging Patient (3)
 411 Health Maintenance Laboratory (4)
 420 Ambulatory Health Care I (4)
 421 Pediatric Appraisal Laboratory (4)
 430 Concepts of Health Guidance During Pregnancy (3)
 431 Laboratory in Health Guidance During Pregnancy (4)

Required in Psychology (4–8 units):

Select from following:

- 412AB Psychology of Human Development (4-4)
 462 Psychology of Human Development: Maturity and Aging (4)

Electives in Nursing and Related Fields (10 units):

Select from following:

In Nursing:

- 444 Assessment of the Individual (2)
 448 Therapeutic Strategies (4)
 460 Problems of Parenting (2)
 462 Behavior Modification in Health Care (4)
 464 Family Interaction Problems (2)

In Health and Safety Studies:

- 462 Chronic and Degenerative Disorders (3)
 468 Narcotic and Dangerous Drug Problems in Health and Safety (3)

In Sociology:

- 441 Sociology of Sex Roles (4)

In Special Education:

- 462 Physical Defects (3)

Option in Mental Health Nursing

This option is designed to prepare nurses in advanced techniques and principles used in mental health services for individuals and groups in health care settings. A total of 38 units is required.

Required in Nursing (22 units):

- 440 Introduction to Community Mental Health (2)
 444 Assessment of the Individual (2)
 445 Clinical Laboratory in Mental Health:

Individual and Group Treatment (4)

- 446 Differential Diagnosis (2)
 447 Clinical Laboratory in Mental Health: Family Therapy and Behavioral Techniques (4)
 448 Therapeutic Strategies in Mental Health (4)
 449 Advanced Clinical Laboratory in Mental Health (4)

Electives in Nursing and Related Fields (16 units):

Select 8 units from following:

In Business:

- 470 Managerial Leadership and Motivation (4)

In Home Economics:

- 423 Parenting (4)

In Psychology:

- 462 Psychology of Human Development: Maturity and Aging (4)

In Psychology/Sociology:

- 422 Social Psychology (4)

In Sociology:

- 420 Small Groups (4)

Select 8 units from following:

In Nursing:

- 460 Problems in Parenting (2)
 464 Family Interaction Problems (2)

In Health and Safety:

- 467 Alcoholism and Drinking Problems in Health and Safety (3)
 468 Narcotic and Dangerous Drug Problems in Health and Safety (3)

In Psychology:

- 410AB Abnormal Psychology (4-4)

In Sociology:

- 426 Deviant Behavior (4)

Courses of Instruction

Lower Division Courses

160 Behavioral Response to Illness and Disability I (2)

Prerequisites: For Nursing majors, Nursing 190; Psychology 150, Biology 200AB (second quarter may be taken concurrently); concurrent enrollment in Nursing 161; for students majoring in other fields, Psychology 150. Health-illness responses, interventive communication patterns and introduction to nursing process.

161 Nursing Process Laboratory I (4)

Prerequisites: Nursing 190, Psychology 150, Biology 200AB (second quarter may be taken concurrently); concurrent enrollment in Nursing 160. Nursing strategies that support patient response to illness; nursing process and interventive communication techniques.

170 Health Assessment I (2)

Prerequisites: Nursing 160, 161; Chemistry 152 (may be taken concurrently); concurrent enrollment in Nursing 171. Health evaluation of individuals in all age groups; emphasis on normal parameters of physiological and psychosocial behavior.

171 Health Assessment Laboratory I (4)

Prerequisites: Nursing 160, 161; Chemistry 152 (may be taken concurrently); concurrent enrollment in Nursing 170. Clinical experience in health evaluation utilizing specific assessment tools with individuals in all age groups.

172 Health Assessment Proseminar (1)

Prerequisite: Registered nurse licensure. Health framework as a basis for assessment of physiological, psychosocial patterns in different age groups, including parameters for diagnostic tests.

190 Introduction to Nursing (2)

Nurse's role within health care system; introduction to philosophies of nursing education.

254 Selected Topics in Nursing (1-6)

Prerequisites: As needed for specific topic. Current topics of special interest to nursing students. Content varies; see *Schedule of Classes* for specific topic.

260 Health Deviations I (4)

Prerequisites: For Nursing majors, Nursing 270, 271; Microbiology 200B (may be taken concurrently); concurrent enrollment in Nursing 261. For students majoring in other fields, Microbiology 200B (may be taken concurrently). Identification, etiology, and manifestations of major pathological conditions of cardio-pulmonary-renal, endocrine, reproductive and gastrointestinal systems.

261 Medical Therapeutics Laboratory I (4)

Prerequisites: Nursing 270, 271; Microbiology 200B (may be taken concurrently); concurrent enrollment in Nursing 260. Nursing intervention techniques which support medical regimens of surgery, drug therapy, fluid and electrolyte therapy and inhalation therapy.

262 Health Deviations II (4)

Prerequisites: For Nursing majors, Nursing 260, 261; concurrent enrollment in Nursing 263. For students majoring in other fields, Nursing 260. Identification, etiology and manifestations of major pathological conditions of integumentary, musculoskeletal, reticuloendothelial and neuropsychiatric systems.

263 Medical Therapeutics Laboratory II (4)

Prerequisites: Nursing 260, 261; concurrent enrollment in Nursing 262. Nursing intervention techniques which support medical regimens of physical medicine and radiation therapy, continued clinical experience in medical regimens of drug therapy, inhalation therapy and surgery.

270 Health Assessment II (2)

Prerequisites: Nursing 170, 171; Microbiology 200A (may be taken concurrently); concurrent enrollment in Nursing 271. Diagnostic tests and procedures utilized in identification of aberrations in physical and psychological function, structure and development. Rationale of specific diagnostic techniques with interpretation of abnormal findings.

271 Health Assessment Laboratory II (4)

Prerequisites: Nursing 170, 171; Microbiology 200A (may be taken concurrently); concurrent enrollment in Nursing 270. Health assessment techniques and instruments in identification of physical and psychological

deviations in various patient situations. Modification of techniques to meet specific patient needs; inferences for planning of nursing care.

Upper Division Courses**354 Selected Topics in Nursing (1-6)**

Prerequisites: As needed for specific topic. Current topics of special interest to nursing students. Content varies; see *Schedule of Classes* for specific topic.

360 Behavioral Response to Illness and Disability II (4)

Prerequisites: For Nursing majors, completion of required lower division Nursing courses or their equivalents; concurrent enrollment in Nursing 361. For students majoring in other fields, Nursing 160 or consent of instructor. Individual and family responses to loss in areas of self-esteem, social identity and existence.

361 Nursing Process Laboratory II (4)

Prerequisites: Completion of required lower division Nursing courses or their equivalents; concurrent enrollment in Nursing 360. Nursing intervention modalities appropriate to patient and family situations involving loss of self-esteem, social identity and existence.

362 Behavioral Responses to Pain, Cognitive and Sensory Disturbances (4)

Prerequisites: For Nursing majors, completion of required lower division Nursing courses or their equivalents; concurrent enrollment in Nursing 363. For students majoring in other fields, upper division standing and Nursing 160 or consent of instructor. Investigation of behavioral responses and influencing variables relating to pain, cognitive, sensory and sleep disturbances.

363 Nursing Process Laboratory III (4)

Prerequisites: Completion of required lower division Nursing courses or their equivalents; concurrent enrollment in Nursing 362. Nursing intervention modalities for patient situations involving pain, cognitive, sensory and sleep disturbances in a variety of health care settings.

355 Laboratory in Multidisciplinary Approaches to Health Problems (2)

Prerequisites: For Nursing majors, completion of required lower division Nursing courses or their equivalents. For students majoring in other fields, upper division standing, Health and Safety Studies 463. Multidisciplinary approaches to treatment of selected health problems.

370 Family Health Assessment (2)

Prerequisites: Completion of required lower division Nursing courses or their equivalents; concurrent enrollment in Nursing 371. Criteria used in family health assessment, including identification of social and cultural variables. Identification of information gathering techniques.

371 Family Health Assessment Laboratory (1)

Prerequisites: Completion of required lower division Nursing courses or their equivalents; concurrent enrollment in Nursing 370. Family health assessment in community setting.

380 Team Dynamics in Nursing (2)

Prerequisites: Completion of required lower division Nursing courses or their equivalents. Team dynamics and strategies for change as applied to nursing situations.

392 Problems and Trends in Health Care System (2)

Prerequisites: For Nursing majors, completion of required lower division Nursing courses or their equivalents. For students majoring in other fields, upper division standing. Major problems and trends in health care system, analysis of effects on nursing.

400 Nursing Care in Acute Cardiorespiratory Crises (4)

Prerequisites: Chemistry 153; Biology 486 (may be taken concurrently); completion of required lower division nursing program or equivalent. Acute management of patients with cardiorespiratory and related renal conditions. Medical and related knowledge in patient assessment during physiological crises.

401 Medical Intensive Care Laboratory (4)

Prerequisites: Nursing 400 and 402 (both may be taken concurrently); completion of required lower division nursing program or equivalent. Care of critically ill medical patients with special emphasis upon coronary care and aggressive patient care in acute respiratory failure.

402 Cardiac Arrhythmia Detection (2)

Identification of major cardiac arrhythmias, including selected therapies. Selected topics in infarction localization and detection.

403 Postsurgical Intensive Care Laboratory (4)

Prerequisites: Nursing 400 and 402 (both may be taken concurrently); completion of required lower division nursing program or equivalent. Care of acutely ill surgical patients with special emphasis upon nursing care of patients undergoing chest and vascular procedures.

404 Nursing Care in Acute Neurometabolic Crises (2)

Prerequisites: Biology 487 (may be taken concurrently); completion of required lower division nursing program or equivalent. Nursing care related to pathophysiological processes of integrative functions, problems involving adaptations of neurological, hormonal, and metabolic systems with emphasis upon pathophysiology and nursing care implications.

405 Laboratory in Selected Areas of Physiological Crises (4)

Prerequisites: Nursing 400, 402, 404, and 406 (any may be taken concurrently); completion of required lower division nursing program or equivalent. Care of patients in selected physiological crises; care of patients with

traumatic injuries, neurological and neurosurgical problems, burns, and acute and chronic renal failure necessitating hemodialysis.

406 Traumatic Injuries (2)

Prerequisite: Completion of lower division nursing program or equivalent. Initial medical approaches to traumatic injuries; primary and supportive nursing roles in acute care and receiving settings.

407 Neonatal ICU Laboratory (4)

Prerequisites: Nursing 408 (may be taken concurrently); completion of required lower division nursing program or equivalent. Application of theory pertaining to critical care of neonates.

408 Critical Care of Neonate (2)

Prerequisites: Nursing 400 and 404 (both may be taken concurrently); completion of required lower division nursing program or equivalent. Medical and nursing aspects of neonatal illness. Consideration given to family responses as well as therapeutic interventions and referrals.

410 Health Assessment and Health Maintenance of Aging Patient (3)

Prerequisites: Upper division standing; completion of required lower division nursing program or equivalent; concurrent enrollment in Nursing 411. Principles of history taking and physical examination strategies in care of adult or aging person. Environmental factors which influence health and health-seeking.

411 Laboratory in Health Assessment and Health Maintenance (4)

Prerequisites: Upper division standing; completion of required lower division nursing program or equivalent; concurrent enrollment in Nursing 410. Eliciting and recording health histories and performing physical examinations and health maintenance activities for adult and aging individuals.

414AB Nursing in Public School Health Programs (5-5)

Prerequisite: B.S. degree in Nursing and Public Health Nursing Certificate. Knowledge and application of basic principles, functions, techniques and methods of public school nursing in California. Discussion 2 hours, field experience 9 hours.

420 Ambulatory Health Care I: Infancy Through Pre-School (4)

Prerequisites: Nursing 360, 362 and 370; concurrent enrollment in Nursing 421. Differential diagnosis and health management of common ambulatory health problems of infant, toddler, and pre-school child.

421 Pediatric Appraisal Laboratory (4)

Prerequisites: Nursing 360, 362 and 370; concurrent enrollment in Nursing 420. Eliciting and recording health histories, performing physical examinations, and evaluating developmental status of children, newborn through adolescence.

430 Concepts of Health Guidance During Pregnancy (3)

Prerequisites: Nursing 360 and 370; Anthropology 444; concurrent enrollment in Nursing 431. Assessment and management in health care of normal pregnant woman and her expected child.

431 Laboratory in Concepts of Health Guidance During Pregnancy (4)

Prerequisites: Nursing 360 and 370; Anthropology 444; concurrent enrollment in Nursing 430. Clinical assessment and management in health care of normal pregnant woman and her expected child.

440 Introduction to Community Mental Health (2)

Prerequisites: For Nursing majors, upper division standing and Nursing 365, 380 and 392; for non-majors, approval of Nursing adviser. Models for community-based intervention in mental health problems; mental health services; nurses' role in community mental health agencies.

444 Assessment of the Individual (2)

Prerequisite: Nursing 360; Psychology 410AB or Sociology 426 recommended. Examination of criteria used in assessing mental health status of the individual.

445 Clinical Laboratory in Mental Health: Individual and Group Treatment (4)

Prerequisites: Nursing 444 and 448 (both may be taken concurrently). Clinical experience in brief therapy and group therapy techniques in health care settings; individual and group therapy sessions in a mental health agency.

446 Differential Diagnosis (2)

Prerequisites: Nursing 360 and 362. Criteria used for differential diagnoses between organic and functional mental disorders in health care settings.

447 Clinical Laboratory in Mental Health: Family Therapy and Behavioral Techniques (4)

Prerequisites: Nursing 444 and 448 (both may be taken concurrently). Clinical experience in family therapy and behavior modification in health care settings.

448 Therapeutic Strategies in Mental Health (4)

Prerequisites: Nursing 360, 361, 370 and 371. Major principles of selected therapeutic strategies utilized by nurse therapist.

449 Advanced Clinical Laboratory in Mental Health (4)

Prerequisites: Nursing 445 or 447. Advanced clinical application of two intervention techniques in health care settings.

454 Selected Topics in Nursing (1-6)

Prerequisites: As needed for specific topic. Current topics of special interest to nursing students. Content varies: see *Schedule of Classes* for specific topic.

460 Problems in Parenting (2)

Prerequisites: Psychology 150 and upper division standing; Home Economics 423 recommended. Parent and child health problems created by inadequate parent-child relationships. Health assessment and exploration of nursing intervention techniques.

462 Behavior Modification in Health Care (4)

Prerequisite: Upper division standing. Techniques for behavior modification in variety of health care problems.

464 Family Interaction Problems (2)

Prerequisite: Upper division standing; Home Economics 421 recommended. Dysfunctional role and communication patterns in family unit.

466 Crisis Intervention (4)

Prerequisite: Upper division standing or consent of instructor. Emphasizes knowledge and skills useful to persons in position to intervene in emotional crises of either situational or maturational nature.

490 Introduction to Nursing Research (3)

Prerequisites: Upper division course in statistics (may be taken concurrently) and consent of instructor. Survey of nursing theory and research. Historical analysis, current status, future needs; overview of research methodology, interpretation and utilization; critical review of selected empirical nursing studies.

492 Special Topics in Nursing (4)

Prerequisite: Senior or graduate standing. Variable content; topic selected with regard to student interest, current issues, and availability of faculty. May be repeated to maximum of 8 units.

494 Legal Aspects of Health Care Provision in California (3)

Prerequisite: Professional experience or upper division standing in a health-related program or consent of instructor. Exploration of legal aspects of health care provision: intentional torts, negligence and malpractice, practice acts, ethical-legal conflicts and litigation procedure.

499 Undergraduate Directed Study (1-4)

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

Pan-African Studies

In School of Letters and Science

The program in Pan-African Studies provides opportunities for Black students and those from other ethnic backgrounds to acquire an insightful understanding of the Black people and their significant contributions to human society. The program aims to prepare Black students through education to take their place as secure, fully participating citizens in their community and in the nation.

The Faculty

Professors: S. O. Akalonu (Chairperson), Huber C. Palmer.

Associate Professors: Robert Duhu, Aida Takla O'Reilly.

Assistant Professors: Jonathan N. Nwomonoh, James F. Payne, G. Jean Soso.

The Undergraduate Program

The program in Afro-American Studies is designed to educate students in the black experience and in interdisciplinary studies, with preparation for careers in teaching, community development and leadership, social work, urban research, law, civil service, industrial relations, and comparable fields. Students electing the major in Afro-American Studies will be equipped for graduate work in this field, as well as in other more traditional disciplines where a general knowledge of social sciences and humanities is prerequisite.

The Bachelor of Arts degree in Afro-American Studies is available with two options. Option I, the General Program and Option II for the Multiple Subject Credential. The latter option is designed specifically for students interested in the examination waiver for the multiple subjects credential.

A minor in Pan-African Studies (Afro-American option) is available for students majoring in other academic fields.

Requirements for the Major

Option I, the General Program consists of 76 units, of which 20 units of lower division and 40 units of upper division are required courses in Pan-African Studies. At least 4 of the 16 units of electives must be in upper division courses.

Option II for the Multiple Subject Credential requires a total of 134 units of which 61 are in a prescribed pattern of General Education courses and 73 units are in Pan-African Studies courses and related areas.

Option I: General Program

Lower Division

Required in Pan-African Studies (20 units):

101 Introduction to Afro-American Studies (4)

250AB African History (4-4)

251AB Afro-American History (4-4)

Upper Division

Required in Pan-African Studies (40 units):

301AB Black Economic Reality (4-4)

302 Black Political Reality (4)

303AB Afro-American Social Thought (4-4)

410 Politics of Black Power (4)

414 American Geopolitics and Ecology of Black Community (4)

420 Afro-American Culture (4)

440AB Community Power Structure Analysis (4-4)

Electives in Pan-African Studies (16 units):

Select four from following:

120A Introductory Swahili I (4)

252AB The Black Family (4-4)

340 American Institutions (4)

400 Personal and Social Adjustment of Afro-Americans (4)

401 Education and the Afro-American (4)

421 History of Afro-American Music (4)

422 Themes in Black Literature (4)

423 Caribbean Literature (4)

425 Black Dialect (4)

432 Comparative Systems of Slavery in Western Hemisphere (4)

460 Dynamics of Social Change in the Third World (4)

470 Proseminar: Influence of Afro-American on Franco-African Literature (4)

Option II: Multiple Subject Credential

BLOCK I: ENGLISH, COMMUNICATION

General Education Requirements (12 units): In English:

150A or B Written Expression I, II (4)

250 Understanding Literature (4)

In Speech Communication:

150 Oral Communication (4)

Major Requirements (20 units): In English:

430 Children's Literature (4)

In Pan-African Studies:

425 Black Dialect (4)

In Speech Communication:

489 Intercultural Communication (4)

490 Studies in Children's Speech Arts (4)

216 / PAN-AFRICAN STUDIES

Select *one* from following:

In English:

- 308 Art of Writing (4)
- 406 Advanced Writing (4)
- 410 Writing in the Schools (4)

In Pan-African Studies:

- 422 Themes in Black Literature (4)

BLOCK II: MATHEMATICS AND SCIENCE

General Education Requirements (18 units):

- Mathematics 120AB Elementary Mathematics for Teachers (4-2)

Select a minimum of 12 units in General Education science courses, including both a physical and a biological science. At least 8 units, including 1 unit of laboratory experience must be taken from the following: Astronomy, Biology, Chemistry, Geology, Microbiology, Physics.

Major Requirements (12 units):

Select from the following with attention to prerequisites and with no more than two courses from any one department: Astronomy, Biology, Chemistry, Geology, Mathematics, Microbiology, Physics, Anthropology 260, Geography 160, Psychology 201.

BLOCK III: SOCIAL SCIENCES

General Education requirements (20 units):

- History 202A or B United States Civilization (4)
- Political Science 150 Government and American Society (4)
- Psychology 150 Human Behavior (4)

Select *two* from following:

In Pan-African Studies:

- 101 Introduction to Pan-African Studies (4)
- 250A or B African History (4)
- 251A or B Afro-American History (4)
- 252A or B The Black Family (4)

Major Requirements (20 units):

Select from following:

In Pan-African Studies:

- 301A or B Black Economic Reality (4)
- 303A or B Afro-American Social Thought (4)
- 400 Personal and Social Adjustment (4)
- 401 Education and the Afro-American (4)
- 414 American Geopolitics and Ecology of Black Community (4)
- 420 Afro-American Culture (4)
- 440A or B Community Power Structure Analysis (4)
- 460 Dynamics of Social Change in Third World (4)

BLOCK IV: HUMANITIES

General Education Requirements (11 units):

- Art 351 Art Appreciation (3)
- Music 150 Music in World Culture (4)
- Philosophy 150 Philosophical Ideas (4)

Major Requirements (22 units):

In Art:

- 400 Development of Literacy in Visual Arts (4)
- 481 African Art (4)

In Music:

- 400 Development of Perception in Musical Arts (4)

In Pan-African Studies:

- 421 History of Afro-American Music (4)

In Swahili:

Select 4 unit class at level appropriate to student's preparation.

Select a minimum of 2 units from following:

Pan-African Studies 499 Undergraduate Directed Study (1-4)

(In Fine Arts or Humanities area)

Other course(s) in Fine Arts or Humanities

Minor in Pan-African Studies

The minor in Pan-African Studies, Afro-American option, consists of 44 units, as follows:

Lower Division

Required in Pan-African Studies (20 units):

- 101 Introduction to Afro-American Studies (4)
- 250AB African History (4-4)
- 251AB Afro-American History (4-4)

Upper Division

Required in Pan-African Studies (24 units):

- 301A Black Economic Reality (4)
- 302 Black Political Reality (4)
- 303A Afro-American Social Thought (4)
- 414 American Geopolitics and Ecology of Black Community (4)
- 440AB Community Power Structure Analysis (4-4)

The Credential Program

The Bachelor of Arts degree program in Afro-American Studies with the Multiple Subject Credential Option is intended for examination waiver for the multiple subject credential. There is currently no approved program in Afro-American Studies for examination waiver for the single subject credential in Social Science. In addition, the Department of Pan-African Studies shares partial responsibility for the Bilingual/Crosscultural Specialist credential. For detailed information regarding these credentials, students should consult advisers in the department and in the School of Education.

Courses of Instruction

Lower Division Courses

100 Introduction to College Environment (4)

Prerequisite: Consent of the department. Discussion of techniques of learning, academic skills and role of the Afro-American in contemporary society. Designed primarily to familiarize Afro-American Educational Opportunity Program students with the academic community. Graded CR/NC only.

101 Introduction to Afro-American Studies (4)

A general overview of Afro-American Studies.

120A Introductory Swahili I (4)

Methodical presentation of structure of language through hearing, speaking, reading and writing Swahili.

120B Introductory Swahili II (4)

Prerequisite: Pan-African Studies 120A or consent of instructor. Methodical presentation of structure of language through hearing, speaking, reading and writing Swahili.

120C Introductory Swahili III (4)

Prerequisite: Pan-African Studies 120B or consent of instructor. Conversational Swahili, essay writing, idiomatic expressions, and reading stories in Swahili.

250AB African History (4-4)

Prerequisite: Pan-African Studies 101. Major themes of African history from origin of Black peoples and traditional African civilization to institutional realities of Africa today.

251AB Afro-American History (4-4)

Development of United States history and its impact upon lives of Afro-Americans from perspective of Black peoples.

252AB The Black Family (4-4)

Structure, functions, and lineal analysis of Afro-American family and its African origin; condition of the Black family during Slavery, Reconstruction, Post-Reconstruction, war periods, the great depression, periods of economic boom and recession, period of Black reevaluation.

*Upper Division Courses***301AB Black Economic Reality (4-4)**

Prerequisite: Pan-African Studies 101. Introduction to nature of economic capitalism and its historical effects on Black peoples and communities. Evaluation of American economic institutions: corporate establishments, fiscal policies of federal and regional governments, banking and finance, labor unions, and the land and law of exclusions.

302 Black Political Reality (4)

Prerequisite: Pan-African Studies 101. Introduction to nature of American government, politics and law, and its historical and contemporary effects on Black people and communities.

303AB Afro-American Social Thought (4-4)

Prerequisite: Pan-African Studies 101; Sociology 201 recommended. Historical and analytical consideration of contributions of Afro-American social thought to development and analysis of the Black protest.

340 American Institutions (4)

Prerequisite: Pan-African Studies 101. Survey of American institutions on a national level. Analysis of organization of American society with respect to Black peoples throughout the world.

400 Personal and Social Adjustment of Afro-Americans (4)

Prerequisite: Pan-African Studies 101 or Psychology 150. Survey of unique developmental experiences of Afro-Americans as they develop in response to pressures of living within a white society.

401 Education and Afro-American (4)

Prerequisite: Pan-African Studies 101. Documented studies of the Black child in various American school systems; investigation of primary factors in significantly lower performance ratings of Black children.

410 Politics of Black Power (4)

Prerequisite: Pan-African Studies 101 or Political Science 150. Black Power in the pattern of group politics in America. Concepts of Black Power. Theories and practices of a cohesive movement of freedom. Designed for political science/social science majors.

414 American Geopolitics and Ecology of Black Community (4)

Prerequisites: Pan-African Studies 101. Study of geographical location of Black people and their environmental relationship to economic and political institutions of the American nation.

420 Afro-American Culture (4)

Prerequisite: Pan-African Studies 101. Exploration of existence of Africanisms, retentions, and syncretisms in the New World and in relationship to contemporary events and society.

421 History of Afro-American Music (4)

Prerequisite: Pan-African Studies 101. Historical and stylistic development of Black music from ancient Africa to present. Assessment of Black musicians who have shaped musical climate of America.

422 Themes in Black Literature (4)

Prerequisite: Pan-African Studies 101. Analysis and discussion of representative works of Black authors from 18th Century to present.

423 Caribbean Literature (4)

Review of early imitative Caribbean literature and its evolution into authentic original and individual expression of self; contemporary Caribbean writers with emphasis upon poetry, novels, and plays of Aime Césaire.

425 Black Dialect (4)

Prerequisite: Pan-African Studies 101. Historical development and understanding of Black dialect from its African past to Afro-American idiom.

432 Comparative Systems of Slavery in Western Hemisphere (4)

Prerequisite: Pan-African Studies 101. Discussion and study of comparative systems of slavery in the western hemisphere with a critical analysis of effects of European imperialism, reaction to colonial rule and birth of Nationalism.

440AB Community Power Structure Analysis (4-4)

Prerequisite: Pan-African Studies 101. Analysis of key institutions and factors of control which compose the power structure in the Black community. Second quarter of course consists of field research in selected Black communities.

460 Dynamics of Social Change in Third World (4)

Prerequisite: Pan-African Studies 101. Identification of the Third World, namely Africa, Asia, and Latin America, and what makes for social change in these areas and their relevance to Afro-American situation in the United States.

470 Proseminar: Influence of Afro-American on Franco-African Literature (4)

Exploration of concept of Negritude as authentic original literary movement, factors that influence it, and reactions it created.

490 Special Topics in Pan-African Studies (4)

Prerequisite: Consent of instructor. Presentation and discussion of academic papers relating to given topic; lectures aimed at critical analysis and appraisal. May be repeated once for credit.

499 Undergraduate Directed Study (1-4)

Prerequisites: Minimum of 8 units in Pan-African Studies, grade point average of 3.0, senior or graduate standing, consent of fulltime faculty member to serve as sponsor, recommendation of department chairman. Term project selected in conference with sponsor; progress meetings held regularly, final report required. May be repeated to maximum of 8 units.

Philosophy

In School of Letters and Science

The programs of study in Philosophy are intended to provide students with principles of inquiry and evaluation relevant to the various areas of human activity, such as science, religion, government, and art; to develop in them skills of analysis, criticism, and synthesis needed for advanced work in any scholarly field; and to acquaint them with noteworthy contributions by philosophers to intellectual traditions.

The undergraduate program is described below, and the graduate program is described in the *Graduate Programs* section.

The Faculty

Professors: Sidney P. Albert, Donald Burrill (Chairperson), James B. Wilson.

Associate Professors: Thomas Annese, Arthur J. Benson, Sharon Hill, George R. Vick.

Assistant Professors: Ann Garry, Jerome S. Simon, Sidney Trivus.

The Undergraduate Program

The Bachelor of Arts degree in Philosophy is especially suited to the needs of three groups of students: those who plan to do graduate work in Philosophy; those who wish to pursue advanced work in other fields where philosophical training is particularly valuable, such as law or theology; and those who seek a strong preparation in the liberal arts.

Requirements for the Major

A total of 52 quarter units in Philosophy is required for the major, at least 40 units of which are in upper division.

Lower Division

Required in Philosophy (8 units):

150 Philosophical Ideas (4)

250 Logic (4)

Upper Division

Required in Philosophy (12 units):

304 Ethics (4)

311 History of Ancient Philosophy (4)

313 History of Modern Philosophy (4)

Electives in Philosophy (8 units):

Select one from following:

312 History of Medieval Philosophy (4)

314 History of Recent Philosophy (4)

Select one from following:

405 Symbolic Logic (4)

460 Metaphysics (4)

470 Theory of Knowledge (4)

Additional Electives (24 units):

Select courses in Philosophy with approval of adviser.

Minor in Philosophy

A total of 32 quarter units in Philosophy is required for the minor, at least 24 units of which are upper division.

Lower Division

Required in Philosophy (8 units):

150 Philosophical Ideas (4)

250 Logic (4)

Upper Division

Required in Philosophy (12 units):

304 Ethics (4)

311 History of Ancient Philosophy (4)

313 History of Modern Philosophy (4)

Electives in Philosophy (12 units):

Select courses with approval of adviser.

The Credential Program

Under new state legislation which governs the credentialing of teachers, there is no teaching credential specifically available for students with a Bachelor of Arts degree in Philosophy. Advisers in the School of Education may be consulted regarding approvable programs.

Courses of Instruction

Lower Division Courses

150 Philosophical Ideas (4)

Major issues of philosophical interest, with special attention to principal intellectual techniques employed by philosophers, both critical and speculative.

220 Contemporary Moral Problems (4)

Philosophical examination of some principles and arguments that occur in contemporary discussions of personal morality and social practice.

238 Comparative Religions (4)

Comparative study of world's living religions: Buddhism, Confucianism, Judaism, Christianity, Islam, and others. Concepts of deity, immortality of the soul, methods of salvation, and influence of environment and culture upon these beliefs.

250 Logic (4)

Analysis and criticism of deductive and inductive reasoning; definition, verification, evidence, validity, truth, and fallacious argument in all areas of inquiry.

Upper Division Courses

304 Ethics (4)

Analysis of empirical and normative factors involved in choice, types of ethical theory, nature of moral standards and judgments.

311 History of Ancient Philosophy (4)

Development of philosophical thought from pre-Socratics to Plotinus; principal thinkers, major problems, and dominant trends in Western thought.

312 History of Medieval Philosophy (4)

Prerequisite: Philosophy 311 recommended. Development of philosophical thought in the Middle Ages; principal thinkers, major problems, and dominant trends in Western thought.

313 History of Modern Philosophy (4)

Prerequisite: One course in philosophy. Development of philosophical thought from the Renaissance to Kant; principal thinkers, major problems, and dominant trends in Western thought.

314 History of Recent Philosophy (4)

Prerequisite: Philosophy 313 recommended. Development of philosophical thought from post-Kantians to early twentieth century; principal thinkers, major problems, and dominant trends in Western thought.

404 Inductive Logic (4)

Prerequisite: Philosophy 250 or equivalent. Analysis of induction and probability in everyday affairs and in science, systematic development of inductive logic, elements of the probability calculus and applications, philosophical issues in inductive logic.

405 Symbolic Logic (4)

Prerequisite: Philosophy 250 or equivalent. Logic and language, nature of argument, meaning and truth, propositional calculus and lower functional calculus, logic of classes, foundations of mathematics.

406 Advanced Logic (4)

Prerequisite: Philosophy 405 or equivalent. Functional calculus with identity and descriptions, axiomatic development of logic, elements of set theory, theory of logical types, philosophical concepts and problems related to logic.

410 Social and Political Philosophy (4)

Prerequisite: One course in philosophy. Philosophical foundations of social and political thought; analysis of such concepts as state, law, obligation, sanction, and their relation to issues in metaphysics, theory of knowledge, and ethics.

412 Philosophical Issues in Feminism (4)

Prerequisite: One course in philosophy. Philosophical principles and issues important to feminist thought.

415 Philosophy of Religion (4)

Prerequisite: One course in philosophy. Systematic approach to issues of noteworthy religious significance, such as eternity, faith, worship, the holy, with aim of distinguishing religion from other modes of human experience.

420 Contemporary Ethical Theory (4)

Prerequisite: Philosophy 304. Contemporary meta-ethical theories, analyses of concept of good, analyses of concept of obligation, validation of moral statements, ethical relativism, praise and blame, moral responsibility.

425 Philosophy of History (4)

Prerequisite: One course in philosophy. Philosophical study of Western historical writing and thought, nature of historical knowledge, historical explanation, history and values, meaning of history.

430 American Philosophy (4)

Prerequisite: One course in philosophy. Major movements of thought and principal thinkers in America from colonial times to twentieth century; relationships of American philosophy to European intellectual currents; influence and bearings of dominant doctrines on American life and outlook.

433 Latin American Philosophy (4)

Prerequisite: One course in philosophy or consent of instructor. Philosophical thought in Latin America with emphasis on contemporary philosophers, especially those of Mexico and Argentina.

436 Philosophy of India (4)

Prerequisite: One course in philosophy. Six orthodox systems of Indian philosophy; Jainism, Buddhism, and Tantra.

437 Philosophy of China and Japan (4)

Prerequisite: One course in philosophy or consent of instructor. Confucianism, Taoism, and Buddhism in China; Japanese Shintoism; major Buddhist schools, related modern movements.

440 Contemporary Philosophy (4)

Prerequisite: One course in philosophy. Major problems and trends in twentieth century philosophy.

445 Existentialism (4)

Prerequisite: One course in philosophy. Major works of existential philosophy; relation of existentialism to contemporary value problems; nineteenth century back-

ground and contemporary varieties of existential thought, both religious and non-religious.

446 Phenomenology (4)

Prerequisite: One course in philosophy. Descriptive and constitutive methodologies of phenomenology; application of phenomenological method to problems in ontology, aesthetics, language, psychology, and social theory.

450 Plato (4)

Prerequisite: Philosophy 311. Exposition and analysis of principal works of Plato.

451 Aristotle (4)

Prerequisite: Philosophy 311. Exposition and analysis of principal works of Aristotle.

455 Continental Rationalism (4)

Prerequisite: Philosophy 313. Exposition and analysis of principal works of Descartes, Spinoza, and Leibniz.

456 British Empiricism (4)

Prerequisite: Philosophy 313. Exposition and analysis of principal works of Locke, Berkeley, and Hume.

457 Kant (4)

Prerequisite: Philosophy 313. Exposition and analysis of principal works of Kant, with emphasis on *The Critique of Pure Reason*.

460 Metaphysics (4)

Prerequisite: Philosophy 150 or 250, preferably both. Critical examination of fundamental principles and their implications in various fields of knowledge, including philosophy itself; and of basic assumptions implicit in certain human activities, such as art, religion, and science.

470 Theory of Knowledge (4)

Prerequisite: Philosophy 150 or 250, preferably both. Analysis of how we know, and how we know we know; theories of evidence, truth, and confirmation.

471 Philosophy of Mind (4)

Prerequisite: Philosophy 150 or 250. Philosophical

analysis of ordinary (in contrast to scientific) concepts of mind, mental phenomena, actions, emotions, and will; philosophical theories of mind.

474 Philosophy in Literature (4)

Philosophical ideas and issues in selected literary works.

475 Aesthetics (4)

Prerequisite: One course in philosophy. Main problems and principal theories of art creation, appreciation, and criticism; aesthetic experience and the work of art; principles of aesthetic evaluation and their bearings on morality, government, society, science, and philosophy.

480 Philosophy of Language (4)

Prerequisites: Philosophy 250 and one additional course in Philosophy. Semantic, syntactic, and pragmatic dimensions of language; theories of signs and meaning; cognitive, emotive, and other features of language; ordinary language and formal language as analytical tools; philosophical importance of language.

485 Philosophy of Science (4)

Prerequisite: Philosophy 250 or upper division standing in any major. Philosophical issues in the physical, life, and social sciences. Problems selected for study may include: concept formation, hypotheses and models, meaning and verification, prediction and explanation, causality and natural law.

490 Philosophy of Law (4)

Prerequisite: One course in philosophy. Philosophical investigation of fundamental presuppositions of legal theory, analysis of basic legal concepts.

495 Proseminar: Selected Works in Philosophy (4)

Prerequisite: Varies according to subject matter. Close study of major philosophical writings, stressing meaning, methods of inquiry, and grounds upon which argued. Content will vary each time offered; may be repeated for credit as subject matter changes.

499 Undergraduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

Physical Education and Athletics

In School of Fine and Applied Arts

The Department of Physical Education and Athletics offers programs leading to the Bachelor of Arts and Master of Arts degrees for students interested in teaching, coaching, dance, or preparation for advanced study in the foundations of human physical performance. Activity courses are open to all students with requisite proficiency, in a wide range of skill levels and in a variety of individual and team or group sports and dance categories. Adapted physical education, providing individual programs of corrective exercises and specially designed sports activities, may be taken by students who need such a program. Assignment by a University physician or departmental adviser is required.

For description of the Master of Arts degree see the *Graduate Programs* section.

The Faculty

Professors: Leonard L. Adams, Homer T. Beatty, Cameron S. Deeds, James G. Dunkelberg, Anita H. Fisher, David R. Glander, Reid J. Gunnell, Joan D. Johnson, Ronald H. Morris, Reed E. Nilsen, Robert M. Oldham, Warren E. Reeves, William E. Wilgus (Chairperson), Albert R. Wise.

Associate Professors: Mary Conroy, Felix T. Costa, Janice Day, Rod A. Faurot, Patricia R. Finot, John W. Hermann (Director of Men's Athletics), Jacqueline C. Hoyt (Director of Women's and Coeducational Athletics), Karen M. Johnson, Gordon T. Maddux, Robert A. Miller, Suzanne M. Powell, Mary L. Schreiber, Burton M. Seidler, Patricia L. Wagner, Emil Wroblicky.

Assistant Professors: Ron E. Hull, Janet A. Seaman, Douglas M. Strehle, Patricia M. White.

Lecturers: Craig Johnson, Susan Lemaire, Lonnie Teper.

Coaches: Larry C. Cochell, Roger D. Dennis, John Erdhaus, Albert N. Marino, (Director of Intramural Sports), Frank M. Moode, Norris Scott, Walter R. Thurmond, James Williams, Walter G. Williamson.

The Undergraduate Program

The Bachelor of Arts program is designed to prepare teachers, coaches, and performers in a variety of activities and foundations courses. Two minors are available for students majoring in other fields, one in General Physical Education and a second with an emphasis in dance.

Requirements for the Major

A total of 72 units is required for the Bachelor of Arts degree in Physical Education. The core of 36 units is required of all majors. The remaining 36 units are allocated to one of three areas of specialization: teaching, dance, or adapted physical education.

General Education Courses

Students electing a Physical Education major or minor must include Biology 200AB in their General Education program. Additionally, the following General Education courses are recommended:

In Physics:

150 Principles of Physics (4)

or

In Chemistry:

151 Fundamentals of Chemistry I (5)

In Anthropology:

250 Cultural Anthropology (6)

In Psychology:

150 Human Behavior (4)

In Sociology:

250 The Individual and Society (4)

In Art:

104 Introduction to Drawing (3)

244 Introduction to Life Drawing (3)

In Philosophy:

150 Philosophical Ideas (4)

In Mathematics:

102 College Algebra (4)

In Health and Safety:

350 Health Maintenance Problems (3)

Required Physical Education Core

The core, taken by all majors, consists of 9 units in lower division foundations courses, 18 units in upper division theory courses, and 9 units in activities courses at a level determined by students'

proficiency. A grade of C or better must be attained in required activity courses in order to meet the physical education major or minor activity requirement.

Lower Division

Physical Education Activities (0–9 units):

In courses numbered 151–256, select one unit from each of the following activity areas, and three additional units from any of these areas: aquatics, dance, dual sports, gymnastics, individual sports, team sports. Students who qualify in proficiency for the upper division 351–356 (advanced) activity courses will have such courses substituted for lower division activity requirements.

Physical Education Concepts (9 units):

- 160 Dimensions of Physical Education (2)
- 161 Introduction to Movement (4)
- 260 Historical Bases of Physical Education (3)

Upper Division

Physical Education Activities (0–9 units):

Select from upper division courses numbered 351–356, distributed as in lower division activity courses, depending on proficiency. The minimum total requirement for both lower and upper division is 9 units.

Physical Education Concepts (18 units):

- 400A Kinesiology (4)
- 400B Physiology of Activity (4)
- 401 Measurement of Human Performance (3)
- 402 Nature of Human Performance (3)
- 408 Principles of Physical Education in Contemporary Society (4)

Areas of Specialization:

Select one of the following areas of advanced study.

TEACHING

Physical Education Activities (6 units):

Select from courses numbered 151–356. These are in addition to those included in core requirements.

Physical Education Concepts (18 units):

- 410 Program Designs in Physical Education (3)
- 411 Class Organization and Conduct (3)
- 412 Prevention and Care of Injuries (3)
- 465me Theory and Analysis of Movement Experiences (3)

Select two additional courses in theory and analysis from two different series numbered 461–465.

Electives (12 units):

Select courses in Physical Education and related areas, with approval of adviser. Students seeking teaching credentials should also see an adviser in the School of Education.

DANCE

Required in Physical Education (12 units):

Select from following:

- 372 Dance Composition (2)
- 379 Dance Performance (1)
- 463 Theory and Analysis of Dance (3)
- 471 Rhythmic Form and Analysis for Dance (3)
- 472 Choreographic Theories and Composition (3)
- 473 History of Dance (3)
- 475 Choreographic Accompaniment (3)
- 477 Dance Production (3)

Electives in Physical Education (12 units):

Select with approval of adviser.

Additional Electives in Physical Education or Related Fields (12 units):

Select with approval of adviser.

ADAPTED PHYSICAL EDUCATION

Required in Physical Education (12 units):

- 450 Dimensions of Physical Education for Exceptional Students (4)
- 452 Physical Education for Mentally Retarded (4)
- 453 Physical Education for the Learning Handicapped (4)
- 455 Motor Assessment for Exceptional Students (4)
- 457 Interdisciplinary Approach to Physical Education for Exceptional Students (4)

Electives in Physical Education (12 units):

- 412 Prevention and Care of Injuries (3)
- 433 Motor Learning (3)
- 439 Statistical Procedures and Experimental Design in Physical Education (3)
- 456 Organization and Implementation of Remedial Physical Education (4)
- 465me Movement Experiences (3)
- 499 Undergraduate Directed Study (1-4)

Additional Electives in Physical Education/Related Fields (12 units):

Select with approval of adviser.

Minors in Physical Education

Two minors in Physical Education are available for students majoring in other fields. Prerequisite to either is Biology 200AB, which may be included in the General Education program. A total of 29–34 units is required for the minor with no special emphasis, and 22–28 for the minor with emphasis in dance.

Minor in General Physical Education

Lower Division

Select two from following:

- 160 Dimensions of Physical Education (2)
- 161 Introduction to Movement (4)
- 260 Historical Bases of Physical Education (3)

Activity Courses (9 units):

In courses numbered 151–256, select 1 unit from each of the following areas, and 3 units from any of these areas: aquatics, dance, dual sports, gymnastics, individual sports, team sports. Students who qualify in proficiency for upper division activity courses will have such courses substituted for corresponding lower division requirements.

Upper Division

Approval of minor adviser is required prior to enrollment in any upper division course.

Required in Physical Education (4 units):

- 400A Kinesiology (4)

Activity Courses (9 units):

Select from courses numbered 351–356, distributed as in lower division activity courses, depending on proficiency. The minimum total requirement for both lower and upper division is 9 units.

*Electives (11–14 units):*Select *three* from following:

- 400B Physiology of Activity (4)
- 401 Measurements of Human Performance (3)
- 411 Class Organization and Conduct (3)
- 412 Prevention and Care of Injuries (3)
- 461 Theory and Analysis of Team Sports (3)
- 463 Theory and Analysis of Dance (3)
- 465 Theory and Analysis of Individual Sports (3)

Select *one* from following:

- 408 Principles of Physical Education in Contemporary Society (3)
- 410 Program Designs in Physical Education (3)
- 416 Sports Officiating for Men: Fall Sports (2)
- 417 Sports Officiating for Men: Spring Sports (2)
- 418 Sports Officiating for Women: Volleyball and Basketball (2)
- 450 Dimensions of Physical Education for Exceptional Students (4)
- 465me Movement Experience (3)

Minor with Emphasis in Dance**Lower Division***Required in Physical Education (4 units):*

- 151pc Physical Conditioning (1)

or

- 151bd Body Dynamics (1)
- 260 Historical Bases of Physical Education (3)

Electives in Physical Education Activities (1–7 units):

Select from following courses:

- 151tt Tumbling and Trampoline (1)
- 153s Beginning Swimming (1)
- 156fd Beginning Folk Dance (1)
- 156m Beginning Modern Dance (1)
- 156s Beginning Social Dance (1)
- 156sr Beginning Square and Round Dance (1)
- 256m Intermediate Modern Dance (1)

Upper Division*Required in Physical Education (17 units):*

- 356m Modern Dance (1)
- 372 Dance Composition (2)
- 379 Dance Performance (1)
- 400A Kinesiology (4)
- 463m Theory and Analysis of Dance: Modern (3)
- 471 Rhythmic Form and Analysis for Dance (3)
- 472 Choreographic Theories and Composition (3)

The Credential Program

The B.A. degree program in Physical Education has been approved by the Commission for Teacher Preparation and Licensing for examination waiver for the single subject credential in Physical Education. Students should consult advisers in both the Department of Physical Education and in the School of Education.

Courses of Instruction**Lower Division Courses**

A student who has completed an intermediate or advanced course may not subsequently receive credit for a lower level course in the same activity.

110 Intramural Sports (1)

Participation in university intramural sports. Elective credit only; may be repeated to maximum of 16 units. Activity 2 hours minimum. Graded CR/NC only.

151 Series: Individual or Dual Sports (1 each)

Individual and dual activities to develop skill, knowledge of rules, background and analysis of techniques at beginning level.

- 151ar Archery
- 151b Badminton
- 151bd Body Dynamics
- 151f Fencing
- 151fi Track and Field: Field Events
- 151g Golf
- 151gh Gymnastics: Vaulting and Uneven Parallel Bars
- 151gl Gymnastics: Beam and Free Exercise
- 151h Handball
- 151hr Horseback Riding
- 151pc Physical Conditioning I
- 151pd Personal Defense
- 151rb Racquet Ball
- 151rx Techniques of Relaxation
- 151sk Skiing
- 151t Tennis
- 151tr Track and Field: Running Events
- 151tt Tumbling and Trampoline
- 151w Wrestling

152 Series: Team Sports (1 each)

Team activities to develop skill, knowledge of rules, background and analysis of techniques at beginning level.

- 152bb Baseball
- 152bk Basketball
- 152f Football
- 152fh Field Hockey
- 152r Rugby
- 152sc Soccer
- 152v Volleyball

153 Series: Aquatics (1 each)

Aquatic activities to develop skill, knowledge of rules, background and analysis of techniques and safety procedures at beginning level.

- 153d Springboard Diving (1)

Prerequisite: Physical Education 153s or consent of instructor.

- 153s Swimming
- 153wp Water Polo

154 Special Activities in Physical Education (1)

Varied experiences reflecting current interests of students in physical education and related experimental areas. May be repeated as subject matter changes. Activity 2 hours.

155 Series: Physical Education for the Disabled (1 each)

Prerequisite: Physical disability or consent of instructor or assignment by University physician. Theory, analysis, and beginning performance techniques of sports for the disabled. Open to interested physical education and recreation majors as well as disabled students in all majors. Each course may be repeated to maximum of 6

units as emphasis changes.

155ad Adapted Physical Education

Individualized programs of exercise or activities.

155l Lifetime Sports

Volleyball, fencing, badminton, and comparable sports in adapted setting.

155w Wheelchair Sports

Team play for recreation or competition in wheelchair games. Basketball, football, and track and field offered on rotating schedule, as announced in *Schedule of Classes*.

156 Series: Dance (1 each)

Activities to develop skill, background knowledge, and understanding of musical relationships at beginning level.

156fd Folk Dance

156m Modern Dance

156s Social Dance

156sr Square and Round Dance

160 Dimensions of Physical Education (2)

Scope and content of physical education discipline. Exploration and identification of avenues for personal and professional growth and understanding. Graded CR/NC only.

161 Introduction to Movement (4)

Movement experiences applicable to programs of physical education, kindergarten through grade twelve. Individual learning experiences related to motor development and basic movement skills. Lecture 2 hours; demonstration-laboratory 4 hours.

200-231 Series: Intercollegiate Athletics (1-2 each)

A maximum of 10 units in intercollegiate athletic courses may be applied toward a baccalaureate degree.

200-213 Men's Intercollegiate Athletics (1-2 each)

Prerequisite: Consent of coach. Advanced practice in performance techniques in preparation for intercollegiate athletic competition.

200 Football (2)

201 Basketball (2)

202 Water Polo (1)

203 Cross Country (1)

204 Wrestling (1)

205 Bowling (1)

206 Baseball (2)

207 Track and Field (2)

208 Golf (1)

209 Tennis (1)

210 Swimming (1)

211 Gymnastics and Tumbling (1)

212 Rugby (1)

213 Soccer (1)

220-231 Women's and Coeducational Intercollegiate Athletics (1 each)

Prerequisite: Consent of coach. Advanced practice in performance techniques in preparation for intercollegiate competition.

220 Archery

221 Badminton

222 Basketball

223 Fencing

226 Golf

227 Gymnastics

228 Tennis

229 Swimming

230 Intercollegiate Track and Field

231 Volleyball

251 Series: Individual or Dual Sports (1 each)

Prerequisite: Corresponding Physical Education 151 course or equivalent competence. Individual and dual activities to develop skill, knowledge of rules, background and analysis of techniques at intermediate level.

251ar Archery

251b Badminton

251bd Body Dynamics

251f Fencing

251fl Track and Field: Field Events

251g Golf

251gh Gymnastics: Vaulting and Uneven Parallel Bars

251gl Gymnastics: Beam and Free Exercise

251h Handball

251hr Horseback Riding

251pc Physical Conditioning II

251pd Personal Defense

251sk Skiing

251t Tennis

251tr Track and Field: Running Events

251tt Tumbling and Trampoline

252 Series: Team Sports (1 each)

Prerequisite: Corresponding Physical Education 152 course or equivalent competence. Team activities to develop skill, knowledge of rules, background and analysis of techniques at intermediate level.

252v Volleyball

253 Series: Aquatics (1 each)

Prerequisite: Physical Education 153s or equivalent competence. Water activities to develop skill, background and analysis of techniques, and safety procedures at intermediate level.

253s Swimming

256 Series: Dance (1 each)

Prerequisite: Corresponding Physical Education 156 course or equivalent competence. Activities to develop skill, background knowledge, and understanding of musical relationships at intermediate level.

256fd Folk Dance

256m Modern Dance

256s Social Dance

256sr Square and Round Dance

260 Historical Bases of Physical Education (3)

Historical and cultural backgrounds in development of physical education.

Upper Division Courses

350 Dance in World Culture (3)

Significant periods in dance as they relate to development of world culture.

351 Series: Individual or Dual Sports (1 each)

Prerequisite: Corresponding Physical Education 251 course or equivalent competence. Individual and dual activities to develop skill, knowledge of rules, background and analysis of techniques at advanced level.

351ar Archery	351h Handball
351b Badminton	351s Skiing
351f Fencing	351t Tennis
351g Golf	351w Wrestling

352 Series: Team Sports (1 each)

Prerequisite: Corresponding Physical Education 252 course or equivalent competence. Team activities to develop skill, knowledge of rules, background and analysis of techniques at advanced level.

352bb Baseball	352s Softball
352bk Basketball	

353 Series: Aquatics (1 each)

Prerequisite: Physical Education 253s or equivalent competence; others as listed below. Water activities to develop skill, background and analysis of techniques, and safety procedures at advanced level.

353d Diving
353ls Life Saving and Water Safety
353s Swimming
353ss Synchronized Swimming
353wp Water Polo (1)

Prerequisite: Physical Education 153wp or consent of instructor.

356 Series: Dance (2 each)

Prerequisite: Physical Education 256m or equivalent competence. Expanded development of skill, knowledge, analysis ability, and study and application of elements of modern dance in solo and group work.

356m Modern Dance (2)

May be repeated to maximum of 6 units.

372 Dance Composition (2)

Prerequisite: Physical Education 356m (may be taken concurrently) or consent of instructor. Introduction to principles of dance composition through individual experiences, studies in use of varied stimuli, processes of construction, simple compositional forms.

379 Dance Performance (1)

Prerequisite: Consent of instructor. Preparation of lecture-demonstrations and dance performances. May be repeated to maximum of 6 units.

398 Cooperative Education (1-3)

Prerequisites: An overall grade point average of 2.35; upper division standing in departmental major or minor; approval of departmental coordinator prior to registration. Active employment, with regular meetings to discuss student's progress. May be repeated to maximum of 6 units. Graded CR/NC only.

400A Kinesiology (4)

Prerequisites: Physical Education 161 and Biology 200AB. Analysis of anatomical and mechanical bases for efficiency of human movement. Lecture 3 hours, laboratory 3 hours.

400B Physiology of Activity (4)

Prerequisite: Physical Education 400A. Analysis of physiological bases of effect of movement and stress on human organism; factors affecting conditioning. Lecture 3 hours, laboratory 3 hours.

401 Measurements of Human Performance (3)

Prerequisite: Physical Education 400A. Analysis, evaluation, interpretation and use of tests and other assessment devices in physical education; application of basic statistical procedures. Lecture 2 hours, discussion-laboratory 3 hours.

402 Nature of Human Performance (3)

Prerequisite: Physical Education 401. Physical growth, motor development, and motor learning related to skill performance. Lecture 2 hours, laboratory 3 hours.

405 Water Safety for Instructors (3)

Prerequisite: Completion of Physical Education 353ls with a grade of "B" or better, or a valid Senior Life Saving Certificate. Advanced instruction in water safety technique, and teaching techniques used at all levels of swimming and life saving. Leads to Red Cross Water Safety Instructor's Certificate. Demonstration laboratory included. Meets 4 hours weekly.

408 Principles of Physical Education in Contemporary Society (4)

Prerequisite: Physical Education 160. Critical examination of physical education objectives and principles; implications for personal and professional direction.

410 Program Designs in Physical Education (3)

Prerequisite: Physical Education 160. Theory, practice and development of curricula in physical education for kindergarten through twelfth grade.

411 Class Organization and Conduct (3)

Prerequisite: Physical Education 402. Analysis and application of organizational patterns; motivational techniques related to effective conduct of physical education classes. Lecture 2 hours, demonstration-laboratory 2 hours.

412 Prevention and Care of Injuries (3)

Prerequisites: Physical Education 400A; consent of instructor for non-majors. Common injuries occurring in physical activity and athletics with emphasis on prevention and care. Lecture 2 hours, laboratory 3 hours.

416 Sports Officiating for Men: Fall Sports (2)

Prerequisites: Physical Education 152f, 152bk, or equivalent. Problems and techniques of officiating football and basketball for boys and men.

417 Sports Officiating for Men: Spring Sports (2)

Prerequisites: Physical Education 152bb, 153s, and 151f or equivalent. Problems and techniques of officiating baseball, track and field, and swimming for boys and men.

418 Sports Officiating for Women: Volleyball and Basketball (2)

Prerequisites: Physical Education 152v and 152bk or equivalent. Problems, techniques and practice in officiating volleyball and basketball for girls and women. Leads to local and national official ratings. Meets 3 hours weekly.

419 Sports Officiating for Women: Softball and Swimming (2)

Prerequisites: Physical Education 153s and 352s or equivalent. Problems, techniques and practice in officiating softball and swimming for girls and women. Leads to local and national official ratings. Meets 3 hours weekly.

420 Movement Experiences in Growth and Development (3)

Movement experiences involving basic locomotor and nonlocomotor patterns and their relationships to time, space, and projectiles as they affect growth and development. Lecture 2 hours, activity 2 hours.

433 Motor Learning (3)

Prerequisite: Physical Education 402. Neurophysiological and psychosocial bases of motor learning in relation to skill acquisition and performance. Lecture 2 hours, laboratory 3 hours.

439 Statistical Procedures and Experimental Design in Physical Education (3)

Prerequisite: Physical Education 401. Measurement of kinesiological variables in physical education; application of statistical procedures and experimental design.

450 Dimensions of Physical Education for Exceptional Students (4)

Prerequisite: Physical Education 401. Conditions requiring special physical education, such as educational, neurological, and orthopedic handicaps, and retardation. Practice teaching required in programs for exceptional students.

452 Physical Education for Mentally Retarded (4)

Prerequisite: Physical Education 450. Etiology of movement characteristics and learning problems of mentally retarded individuals. Practicum teaching or supervision required.

453 Physical Education for the Learning Handicapped (4)

Prerequisite: Physical Education 450 or consent of instructor. Problems of learning-handicapped pupils in physical activity context; implications for physical education program development. Lecture 3 hours, practicum 2 hours.

454 Special Topics in Physical Education (3-4)

Prerequisite: Varies with topic; see *Schedule of Classes* for specific prerequisite. Current issues and interests of students in physical education and related experimental areas. Lecture and activity.

455 Motor Assessment for Exceptional Students (4)

Prerequisite: Physical Education 450. Study of prevalent disabilities, with implications for program development, organization, administration, and evaluation of adapted physical education at elementary and secondary school levels. Evaluation and diagnosis of motor problems; prescription of adapted, developmental, and remedial physical education programs for elementary and secondary school students. Practical experience with assessment required.

456 Organization and Implementation of Remedial Physical Education (4)

Analysis of prevalent disabilities; implications for program development, organization, administration, and evaluation of remedial physical education students in elementary and secondary schools. Lecture 3 hours, practicum 2 hours.

457 Interdisciplinary Approach to Physical Education for Exceptional Students (4)

Roles and responsibilities of recreation, psychology, special education, nursing, physical and occupational therapy, and other professionals in physical education of exceptional students.

460 Outdoor Education (3)

Aims, organization, administration, and program of the outdoor school.

461 Series: Theory and Analysis of Team Sports (3 each)

Prerequisite: Appropriate professional activity courses as indicated. Theory, analysis and advanced performance techniques of team sports, emphasizing strategy and offensive and defensive systems. Lecture 2 hours, demonstration laboratory 2 hours for each.

461bb Baseball

Prerequisite: Physical Education 152bb or equivalent.

461bk Basketball

Prerequisite: Physical Education 152bk or equivalent.

461f Football

Prerequisite: Physical Education 152f or equivalent.

461fs Field Sports, Fall

Prerequisites: Physical Education 152fh, 152sc, 161 and 325s or equivalent for majors; consent of instructor for non-majors.

461v Volleyball

Prerequisites: Physical Education 152v and 161 for majors; consent of instructor for non-majors.

461wp Water Polo

Prerequisite: Physical Education 153wp or equivalent.

463 Series: Theory and Analysis of Dance (3 each)

Prerequisite: Appropriate professional activity courses as indicated. Theory, analysis and advanced performance of dance; structural elements, rhythm, creativity and selection of accompaniment. Lecture 2 hours, demonstration laboratory 2 hours for each.

463fs Folk and Social

Prerequisites: Physical Education 160, 161, 256fd

and 256s or equivalent for majors; consent of instructor for non-majors.

463m Modern

Prerequisite: Physical Education 156m.

463sq Square

Prerequisites: Physical Education 161 and 156sr or 256sr or equivalent for majors; consent of instructor for non-majors.

465 Series: Theory and Analysis of Individual Sports (3 each)

Prerequisite: Appropriate professional activity courses as indicated. Theory, analysis and advanced performance techniques of individual sports, emphasizing strategy and offensive and defensive maneuvers. Lecture 2 hours, demonstration laboratory 2 hours for each.

465d Theory and Analysis of Diving

Prerequisites: Physical Education 161 and 353d or equivalent experience in diving for majors; consent of instructor for non-majors. Theory, analysis, and advanced performance of springboard diving.

465g Golf

Prerequisites: Physical Education 160, 161 and 251g or equivalent for majors; consent of instructor for non-majors.

465gt Gymnastics and Tumbling

Prerequisites: Physical Education 151tt, 151gl, and 151gh.

465me Movement Experiences

Prerequisites: Physical Education 161 and 402. Theory, analysis, and exploration of graded and sequential movement experiences from kindergarten through grade six.

465s Swimming

Prerequisites: Physical Education 161 and 253s or 353s or equivalent for majors; consent of instructor for non-majors.

465t Tennis

Prerequisites: Physical Education 160, 161, and 251t or equivalent for majors; consent of instructor for non-majors.

465tf Track and Field

Prerequisites: Physical Education 151tr and 151fl.

465w Wrestling

Prerequisites: Physical Education 151w.

471 Rhythmic Form and Analysis for Dance (3)

Prerequisite: Physical Education 356m or consent of instructor. Historical analysis of rhythmic elements inherent in music and movement, application and ap-

preciation of their organization as a basis of form in dance.

472 Choreographic Theories and Composition (3)

Prerequisite: Physical Education 372 or 471 or consent of instructor. Application of principles and materials of dance in development of group and solo compositional forms.

473 History of Dance (3)

Study of various forms of dance including ethnic, folk, and formal art forms as related to social, economic, and political history of man.

474 Critical Analysis of Dance (3)

Prerequisites: Physical Education 473 and Philosophy 150; Philosophy 475 recommended. Critical analysis of heritage, purposes, values, and basic beliefs in various forms of dance.

475 Choreographic Accompaniment (3)

Prerequisite: Physical Education 472 or consent of instructor. Sound as it relates to movement, critical analysis of music for dance, special attention to selection of appropriate accompaniment. Meets 4 hours weekly.

477 Dance Production (3)

Prerequisite: Physical Education 472 or consent of instructor. Preparation of dance materials for performance; directing, lighting, costuming and makeup for dance.

495 Special Studies in Physical Education (3)

Prerequisite announced in *Schedule of Classes* prior to each offering. Intensive study of a specific subject area in physical education and athletics. May be repeated to maximum of 9 units as subject matter changes.

496 Special Projects (1-3)

Prerequisites: Senior or graduate standing, consent of department chairman and faculty member. Participation under faculty supervision in planning, preparing, presenting and coaching California State University, Los Angeles-sponsored intramural, extramural or inter-collegiate athletic activities. May be repeated for credit.

499 Undergraduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Project selected in conference with sponsor before registration; progress meetings held regularly, and final report submitted. May be repeated for credit.

Physics

In School of Letters and Sciences

The Department of Physics offers undergraduate and graduate programs in physics, with opportunities for professional preparation in a variety of directions, including nuclear physics, solid state, biophysics, and radiological physics.

The undergraduate programs offered include three for the Bachelor of Science degree, one for the Bachelor of Arts, and a minor in physics for students majoring in other fields. The Bachelor of Science curricula include the general program without specialization, and options in Biophysics and in Radiological and Health Physics. The department also offers courses in Astronomy, but does not have major or minor programs in that area.

The Master of Science degree is described in the *Graduate Programs* section.

The Faculty

Professors: Ted C. Bradbury, Robert H. Carr, Bruce Dayton, Donald E. Hudson, Demetrius J. Margaziotis (Chairperson), Fernando B. Morinigo, Frieda A. Stahl, Ross D. F. Thompson, Hubert C. Winkler, Fleur B. Yano.

Associate Professors: Roland L. Carpenter, Berken Chang, Harold L. Cohen, Charles C. Coleman, Martin B. Epstein, Perry S. Ganas, Daniel A. Gollnick, David T. Gregorich, Lester Hirsch, William A. Taylor, John C. Woolum.

Departmental Honors Program

The Physics Department offers an Honors Program for qualified students. It allows more flexibility in selection of courses, greater opportunity for independent study, and an introduction to research. Diplomas and transcripts of Honors Program graduates are designated: "*Graduated with Departmental Honors in Physics.*" Further information may be obtained from the department's principal adviser.

Bachelor of Science Degree

The Bachelor of Science degree, which requires a total of 198 units, may be used as preparation for graduate work or as a qualifying degree for professional employment. Selection of electives in Astronomy provides substantial background for students planning graduate study in that field.

Programs in physics are built on a foundation of high school studies in mathematics and physical sciences. For completion of a Bachelor of Science program in 12 quarters, high school preparation is recommended in physics, chemistry, geometry, trigonometry, and two years of algebra.

In planning their university programs, students who wish to prepare for graduate study in physics are advised to include 12 units of French, German, or Russian, a portion of which will earn General Education credit.

The B.S. degree in Physics is available either in the general program first listed, or in specialized options which follow.

Requirements for the Major

The major consists of 118 units in Physics and related fields, of which 55 are in lower division and 63 in upper division. Students must earn a grade of C or better in all courses used to meet the requirements for the major.

Lower Division

Required Courses (55 units):

In Physics:

201-06 General Physics (4-4-4-4-4-4)

In Chemistry:

101 General Chemistry I (5)

122-23 Principles of Chemistry (5-5)

In Mathematics:

206-09 Calculus I-IV (4-4-4-4)

Upper Division

Required Courses (46 units):

In Mathematics:

302 Differential Equations for Engineers and Physicists (4)

In Physics:

312 Basic Electronics (4)

410AB Mathematical Methods of Physics (4-4)

425AB Introduction to Theoretical Physics (4-4)

426AB Electricity and Magnetism (3-3)

427 Thermodynamics (4)

432AB Introductory Quantum Mechanics (3-3)

470 Advanced Physics Laboratory I (3)

471 Advanced Physics Laboratory II (3)

Electives (17 units):

Select with approval of adviser; at least 9 units must be in Physics.

Option in Biophysics

The Bachelor of Science degree in Physics, Biophysics option, may be used as preparation for graduate work in Biophysics or as a degree for professional employment.

Requirements for the Option

The option consists of 123 units in Physics, Biology and related fields, of which 73 are in lower division and 50 in upper division. Students must earn a grade of C or better in all courses used to meet the requirements for the major and option.

Lower Division

Required Courses (73 units):

In Physics:

201-06 General Physics (4-4-4-4-4-4)

In Chemistry:

101 General Chemistry I (5)

122-23 Principles of Chemistry (5-5)

In Mathematics:

206-09 Calculus I-IV (4-4-4-4)

In Biology:

101 Biology of Animals (5)

102 Biology of Plants (5)

In Microbiology:

200AB General Microbiology (5-3)

Upper Division

Required Courses (44 units):

In Physics:

312 Basic Electronics (4)

410A Mathematical Methods of Physics (4)

432A Introductory Quantum Mechanics (3)

443AB Biophysics (3-3)

In Mathematics:

302 Differential Equations for Engineers and Physicists (4)

In Chemistry:

301ABC Organic Chemistry (3-3-3)

401 Physical Chemistry I (4)

and

402 Physical Chemistry II (4)

or

403 Physical Chemistry III (4)

431AB Biochemistry (3-3)

Electives (6 units):

Select courses in Physics or Chemistry, with approval of adviser.

Option in Radiological and Health Physics

The Bachelor of Science degree in Physics, Radiological and Health Physics option, may be used as preparation for graduate work in radiological or health physics or as a degree for professional employment.

Requirements for the Option

The option consists of 123 units in Physics, Biology and related fields, of which 77 are in lower division and 46 are in upper division. Students must earn a grade of C or better in all courses used to meet the requirements for the major and option.

Lower Division

Required Courses (77 units):

In Physics:

201-06 General Physics (4-4-4-4-4-4)

In Chemistry:

101 General Chemistry I (5)

122-23 Principles of Chemistry (5-5)

208ABC Bio-organic Chemistry (4-4-4)

In Mathematics:

206-09 Calculus I-IV (4-4-4-4)

In Biology:

200AB Human Anatomy and Physiology (5-5)

Upper Division

Required Courses (39 units):

In Physics:

312 Basic Electronics (4)

443B Biophysics (3)

444 Nuclear Physics I (4)

466AB Radiological and Health Physics (5-5)

468AB Fieldwork in Radiological and Health Physics (2-1)

470 Advanced Physics Laboratory I (3)

In Biology:

302 Biometrics (4)

330 Cell Biology (4)

In Mathematics:

302 Differential Equations for Engineers and Physicists (4)

Electives (7 units):

In Physics:

Select one course with approval of adviser.

In Biology:

Select one from following:

401 Microtechniques (4)

402 Electron Microscopy (4)

412 Cytology (4)

415 General Genetics (4)

433 Animal Physiology I (4)

434 Animal Physiology II (4)

438 Comparative Physiology (5)

Bachelor of Arts Degree

The Bachelor of Arts degree in Physics provides a program appropriate for students interested in such careers as teaching, public service, business, or science journalism. This program does not include the advanced study needed by students who wish to prepare for careers as physicists, but provides the breadth needed for many other innovative and challenging occupations.

Requirements for the Major

The major consists of 55 units in lower division and 40 units in upper division courses, with a total of 186 units required for the degree. Students must earn a grade of *C* or better in all courses used to meet requirements for the major.

Lower Division

Required Courses (55 units):

In Physics:

201-06 General Physics (4-4-4-4-4-4)

In Chemistry:

101 General Chemistry I (5)

122-23 Principles of Chemistry (5-5)

In Mathematics:

206-09 Calculus I-IV (4-4-4-4)

Upper Division

Required in Mathematics (4 units):

302 Differential Equations for Engineers and Physicists (4)

Electives in Physics (22-32 units):

Select from following:

311 Elements of Modern Astronomy (3)

312 Basic Electronics (4)

410A Mathematical Methods of Physics (4)

411 Astrophysics (3)

427 Thermodynamics (4)

431 Modern Optics (4)

444 Nuclear Physics I (4)

465 Applications of Group Theory to Chemistry and Physics (4)

470 Advanced Physics Laboratory I (3)

471 Advanced Physics Laboratory II (3)

491 Topics in Contemporary

Experimental Physics (3)

492 Topics in Contemporary Theoretical Physics (3)

Additional Electives (4-14 units):

Select with approval of adviser.

Minor in Physics

A minor in Physics is available for students majoring in other fields. A total of 60 units in physics and mathematics, of which 40 units are in lower division and 20 are in upper division courses, is required. Students majoring in fields which require the same courses as those required for the minor in physics will need to take only those courses in the minor program which are not incorporated into their major. However, they must complete the state-mandated minimum of 18 units exclusive of the major, with a minimum of 9 units in upper division.

Lower Division

Required Courses (40 units):

In Physics:

201-06 General Physics (4-4-4-4-4-4)

In Mathematics:

206-09 Calculus I-IV (4-4-4-4)

Upper Division

Required in Mathematics (4 units):

302 Differential Equations for Engineers and Physicists (4)

Electives (16 units):

Select with approval of minor adviser.

The Credential Program

Programs designed to provide examination waiver status for the single subject credential in Physical Science are under preparation. Students should consult advisers in the department and in the School of Education.

The Physics Department offers, through undergraduate directed study, the opportunity for preparation of prospective teachers in the curriculum and materials of PSSC, Project Physics, and other contemporary high school physics programs. Credit within the major program is assigned through Physics 499.

Courses in Physics

Lower Division Courses

101-103 Physics (4-4-4)

Fundamental treatment of physics without use of calculus. Required for biological science majors, recommended for behavioral science majors. Biologists planning graduate work may find the 201-206 series in general physics with calculus better suited to their needs. Lecture 3 hours, laboratory 3 hours for each course.

101: Prerequisite: Knowledge of elementary algebra and trigonometry. Mechanics of particles, rigid bodies, and fluids; gravitation; simple harmonic motion; waves; sound.

102: Prerequisite: Physics 101. Thermal physics, kinetic theory, electricity and magnetism, light and relativity.

103: Prerequisites: Physics 101 and 102. Quantum, atomic structure and spectra, nuclear reactions and fundamental particles.

150 Principles of Physics (4)

Prerequisite: Ability to use simple algebraic equations. Introductory General Education course, not for science or engineering majors. Basic concepts of mechanics, sound, heat, electricity, light, relativity, atomic and nuclear structure. Laboratory 3 hours, lecture 3 hours.

154 Selected Topics in Physics (1-6)

Prerequisite: Specific prerequisites announced each quarter in *Schedule of Classes*. Topics include physical ecology, energy sources and energy conversion, relevance of physics in solving or creating problems of modern technological society.

155 Nature of Physical World (4)

Nonmathematical, primarily for non-majors in science. Modern concepts of space, time and matter, and their application to understanding the physical world. Includes topics in modern physics, cosmology, biophysics, and use of physics in ecology.

201–206 General Physics (4-4-4-4-4-4)

Two-year sequence for physical science and engineering majors, using calculus. Lecture 3 hours, laboratory 3 hours for each course.

201: Prerequisites: High school physics, or permission of department; Mathematics 206 (may be taken concurrently). Vectors, mechanics of particles and rigid bodies, basic conservation laws of mechanics.

202: Prerequisites: Physics 201; Mathematics 207 (may be taken concurrently). Mechanical vibrations and sound, elementary thermodynamics.

203: Prerequisites: Physics 202; Mathematics 208 (may be taken concurrently). Elementary field theory, basic electricity and magnetism, DC and AC circuits.

204: Prerequisites: Physics 203; Mathematics 209 (may be taken concurrently). Continuation of electricity and magnetism including oscillations and waves; geometric and physical optics.

205: Prerequisites: Physics 204; Mathematics 209 (may be taken concurrently). Topics in modern physics including special relativity, elementary quantum physics, atomic theory, Schrödinger's equation.

206: Prerequisite: Physics 205. Continuation of modern physics including optical and x-ray spectra, electron physics, solid state physics, nuclear and particle physics.

Upper Division Courses**311 Elements of Modern Astronomy (3)**

(Also listed as *Astronomy 311*)

Prerequisite: Physics 205. Survey of modern astronomy, designed for students majoring in physical sciences, engineering, or mathematics.

312 Basic Electronics (4)

Prerequisite: Physics 204. Design, use, and analysis of vacuum tube and solid-state circuits and devices. Lecture 3 hours, laboratory 3 hours.

351N Introductory Medical Physics and Instrumentation (4)

(Also listed as *Engineering 351N*)

Prerequisite: Chemistry 151. Elementary electricity, heat, sound, wave motion, as applied to examples in human physiological phenomena and in biomedical instruments. Physical principles and operation of transducers, amplifiers, recorders, and selected biomedical instruments. Lecture 3 hours, laboratory 3 hours.

396 Honors Studies in Physics (3)

Prerequisite: Admission to Departmental Honors Program. Study leading to colloquium presentation required for conferral of Bachelor of Science degree with Departmental Honors in Physics.

402N Radiation Biophysics (4)

Prerequisites: Physics 103 and a grade of C or better in Biology 103. Nuclear structure, radiation physics, radiobiological effects, target theory, and health physics. Not open to majors in Physics, Chemistry, Mathematics or Engineering. Lecture 3 hours, laboratory 3 hours.

410AB Mathematical Methods of Physics (4-4)

Prerequisites: Physics 204 and Mathematics 302 or 401. Vector calculus, integration, series, complex variables, special functions, boundary value problems, calculus of variations. Emphasis on mathematical solution of problems in physics.

411 Introduction to Astrophysics (3)

(Also listed as *Astronomy 411*)

Prerequisites: Physics 206; Physics 311 strongly recommended. Celestial mechanics, stellar interiors, atmospheres, and evolution; introductory cosmology.

425AB Introduction to Theoretical Physics (4-4)

Prerequisites: Physics 205 and 410A. Application of mathematics to solutions of problems in physics with emphasis on general area of mechanics; Newtonian, Lagrangian, and Hamiltonian mechanics, field theory, special relativity.

426AB Electricity and Magnetism (3-3)

Prerequisites: Physics 205 and 410A. Theoretical electricity and magnetism; properties of electric and magnetic fields, electromagnetic waves; emphasis on mathematical solution of problems.

427 Thermodynamics (4)

Prerequisites: Physics 205 and Mathematics 302. Introduction to thermodynamics and statistical physics; emphasis on mathematical solution of problems.

428 Statistical Physics (3)

Prerequisite: Physics 427. Introduction to statistical mechanics, transport phenomena, fluctuations; emphasis on mathematical solution of problems.

431 Modern Optics (4)

Prerequisites: Physics 205 and 410AB or consent of instructor. Concurrent enrollment in Physics 471 recommended. Introduction to modern optics: geometric optics by matrix methods, partial polarization, coherence, diffraction, quantum optics and developments in laser technology.

432AB Introductory Quantum Mechanics (3-3)

Prerequisites: Physics 206 and 410A. Introduction to quantum mechanics with applications; emphasis on mathematical solution of problems.

432A: Fundamentals of wave mechanics, wave packets and the uncertainty principle, Schrödinger equation, operators and eigenfunctions, one-dimensional problems.

432B: Central potentials, spectroscopy, spin and angular momentum, symmetry and conservation laws.

433 Solid State Physics I (4)

Prerequisites: Physics 432A; 427 recommended. Crystal structure, thermal and electrical behavior of insulators, metals and semiconductors; band theory.

434 Solid State Physics II (4)

Prerequisites: Physics 432A; 427 and 433 recommended. Fermi surface, transport theory, superconductivity, magnetic resonance, optical properties, superfluidity, ion implantation.

443AB Biophysics (3-3)

Prerequisite: Completion of lower division biophysics or biochemistry program or equivalent. 443A: Physical aspects of living state. Lecture 3 hours. 443B: Theory and practice of physical methods used in measurement of biological processes. Lecture 2 hours, laboratory 3 hours.

444 Nuclear Physics I (4)

Prerequisite: Physics 206. Nuclear phenomenology; alpha, beta and gamma decays, nuclear reactions; nuclear energy; radiation detectors; radioactivity.

445 Nuclear Physics II (4)

Prerequisites: Physics 432A; 432B recommended (may be taken concurrently). Nuclear theory; two-nucleon problem, nuclear spectroscopy; nuclear models, nuclear reactions, three-body problems.

465 Applications of Group Theory to Chemistry and Physics (4)

Prerequisites: Physics 205 and Mathematics 209. Theory of finite and continuous groups, group representations, and group algebra; applications to atoms, molecules, spectroscopy, solid state physics, nuclear physics, and particle physics.

466AB Radiological and Health Physics (5-5)

Prerequisites: Physics 206 and Biology 200AB. Radiation dosimetry, personnel and environmental monitoring, x-ray safety, radiation biology, medical radiation physics, non-ionizing radiation protection, shielding design, and reactor and accelerator hazards. Lecture 3 hours, laboratory 6 hours.

468AB Field Work in Radiological and Health Physics (2-1)

Prerequisite: Physics 466AB. Participation with professionals in an approved industrial health physics or medical radiological physics program, according to the student's field of interest. Analysis and reports of student's performance. Regular group study meetings.

469 Physical Electronics (3)

Prerequisites: Physics 206, 426AB and 427. Electron emission, behavior of charged particles in electric and magnetic fields in vacuum, gases, and solids; principles of modern electron devices, plasma phenomena, quantum electronics.

470 Advanced Physics Laboratory I (3)

Prerequisites: Physics 206 and 312. Instrumentation, techniques, and analytical evaluation involved in current experimental practice; basic experiments in vacuum techniques, and in classical, solid-state, and nuclear physics. Lecture 1 hour, laboratory 6 hours.

471 Advanced Physics Laboratory II (3)

Prerequisite: Physics 470. Further advanced laboratory experience in contemporary fields. Experiments in nuclear physics, solid-state physics, cryogenics, optics, las-

er physics, spectroscopy and related topics, as selected by instructor. Lecture 1 hour, laboratory 6 hours. May be repeated to maximum of 9 units.

488 Modern Topics in General Relativity (3)

(Also listed as Astronomy 488)

Prerequisites: Physics 410AB; 425AB strongly recommended. Introduction to basic ideas of general relativity: physics of spacetime, relativistic stars, gravitational collapse and black holes, gravitational waves, testing of general relativity.

491 Topics in Contemporary Experimental Physics (3)

Prerequisite: Upper division or graduate standing in Physics, or consent of instructor. Other prerequisites may be listed in the department announcement. Each section of course is a lecture series designed to present current developments in research; laboratory program may be included. Announcements of each offering will be made in *Schedule of Classes* and in Department of Physics. May be repeated for credit.

492 Topics in Contemporary Theoretical Physics (3)

Prerequisite: Upper division or graduate standing in Physics, or consent of instructor. Other prerequisites may be listed in department announcement. Each section of course in a lecture series designed to present current developments in theory. Announcements of each offering will be made in *Schedule of Classes* and in Department of Physics. May be repeated for credit.

497 Undergraduate Research (1-4)

Prerequisite: Consent of faculty sponsor prior to registration. Laboratory work organized on a project basis open to a limited number of qualified physics majors each year. Emphasis on developing experimental ability and initiative of the student. May be repeated for credit.

499 Undergraduate Directed Study (1-4)

Prerequisites: Consent of a faculty sponsor before registration and ability to work independently. Includes regular conferences with sponsor and preparation of a report. May be repeated for credit.

Courses in Astronomy

151 Principles of Astronomy (3)

Concurrent enrollment in Astronomy 152 recommended. Non-mathematical survey of modern astronomy, primarily for non-majors in science. Properties and evolution of solar system, stars, and universe.

152 Principles of Astronomy: Laboratory (1)

Prerequisite: Astronomy 151 (may be taken concurrently). Laboratory and field trips designed to complement Astronomy 151 lecture. Laboratory 3 hours.

311 Elements of Modern Astronomy (3)

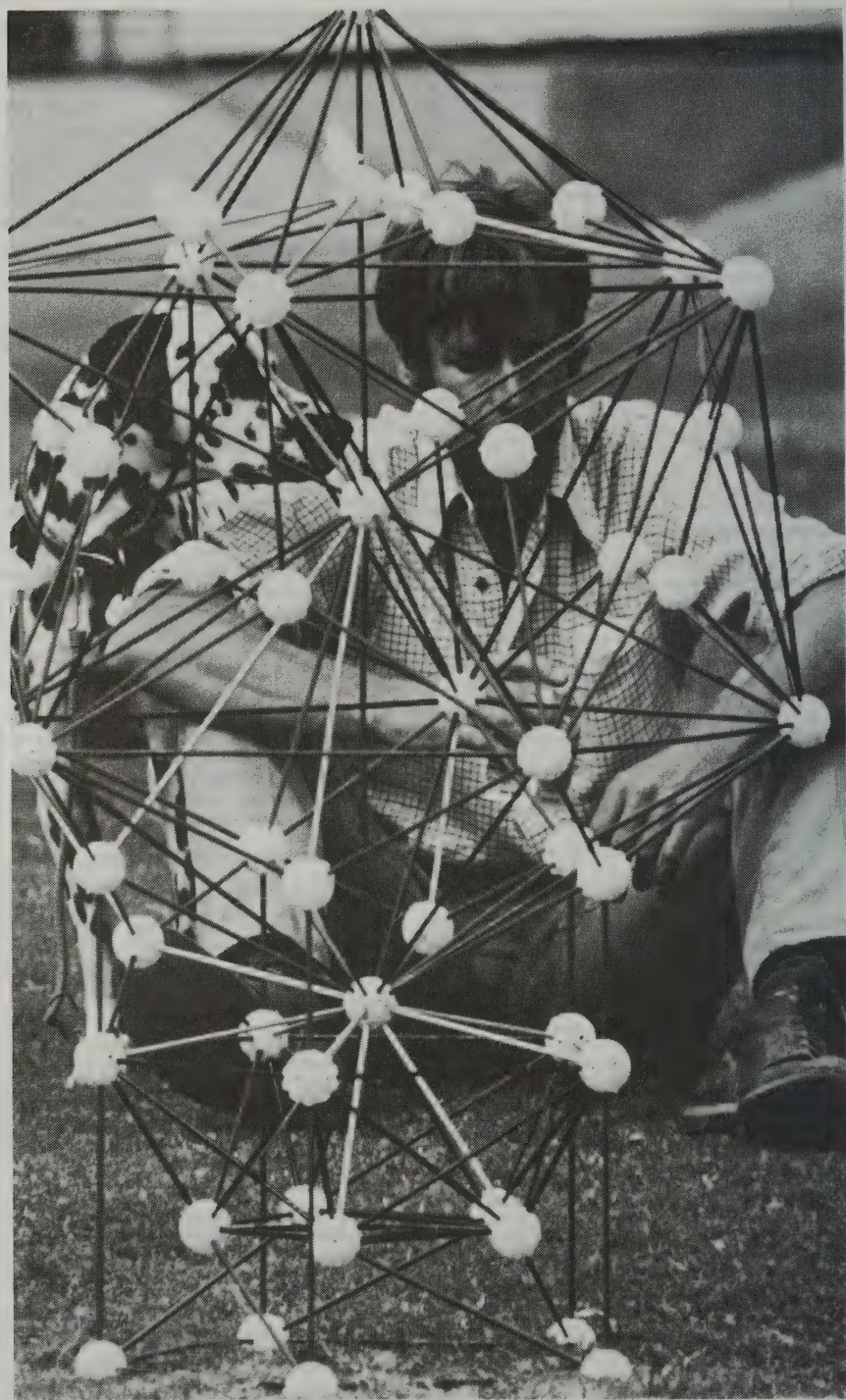
(See Physics 311 for course description.)

411 Introduction to Astrophysics (3)

(See Physics 411 for course description.)

488 Modern Topics in General Relativity (3)

(See Physics 488 for course description.)



Political Science

In School of Letters and Science

The Department of Political Science offers both undergraduate and graduate programs to prepare students for professional careers in public service, law or international relations, as well as teaching in the discipline. The undergraduate program is described below. The Master of Arts in Political Science and the Master of Science in Public Administration are described in the *Graduate Programs* section.

The Faculty

Professors: Donald W. Bray, Robert B. Callahan, Eugene P. Dvorin, Edward M. Goldberg (Chairperson), Harry S. Hall, John L. Houk, Thomas McEnroe, Arthur J. Misner, Addison Potter, Dennis M. Ray, Thomas A. Rusch, Ake Sandler, Robert Simmons, Donald W. Urquidi.

Associate Professors: A. Didrick Castberg, Stanley D. Hopper, George C. Littke, Edward S. Malecki, Benjamin W. Smith, George P. Smith, Virgil H. Stevens, Kenneth A. Wagner, Tully E. Warren.

Assistant Professor: Daniel D. Sager.

The Undergraduate Program

Five options are offered in the Bachelor of Arts degree program in Political Science, each adapted to different objectives as follows:

(1) The *Pre-Legal Option* provides undergraduate preparation for entrance into a graduate school of law.

(2) The *International Relations Option* prepares for careers that involve foreign affairs and special career training for those who wish to emphasize administration in the international field.

(3) The *General Political Science Option* is a general program of undergraduate preparation for active participation in public life or for graduate study. This option is also intended for students interested in the single subject credential in Government.

(4) The *Option for Single Subject Credential in Social Science* is intended for students who wish to qualify for examination for waiver for this credential.

(5) The *Public Administration Option* provides preprofessional and professional training for entrance into career, government service on the federal, state, or local levels, or for positions on the research or administrative staffs of quasi-public or endowed organizations. This option may be coordinated with an internship in public service. See Political Science 398.

In addition, the department participates in the interdisciplinary Bachelor of Arts degree program in Social Science, for which a concentration in Political Science may be taken. This program is described under Social Science.

Requirements for the Major

The major requirements for Options (1), (2), (3), and (4) above combine a core program of 32 units taken by all students with an elected option program of lower and upper division courses in Political Science and related fields. The Public Administration Option has separate requirements, described on page 237. Total unit requirements vary with the options.

Core Requirements

The 32 units of courses for the core program are as follows:

Lower Division

Required in Political Science (12 units):

201AB Principles of Political Science I (2-2)

202AB Principles of Political Science II (2-2)

280 Quantitative Methods in Political Science (4)

Upper Division

Required in Political Science (20 units):

Select one course in each of five of the following fields, with approval of adviser.

American Government and Politics

Political Science 402, 403, 418, 419

Political Philosophy

Political Science 410, 411, 413

Empirical Theory and Methodology

Political Science 409, 421

International Relations

Political Science 425, 427

Comparative Government

Political Science 423, 430-439

Public Law

Political Science 440–446

Public Administration

Political Science 460

Option Requirements

Choice of one of four options (Pre-Legal, International Relations, General Political Science, Single Subject Credential in Social Science) completes the degree program. Requirements for each of the first four option programs are as follows:

Pre-Legal Option

Required for this option are 18–20 units of lower division courses and 44 units of upper division courses, in addition to the core requirements described above. Transfer students must have their program approved in the Pre-Legal Option before beginning their upper division program; lower division students, as soon as possible after admission.

Lower Division

Required in Political Science (2 units):

201C Proseminar in Political Science I (2)

or

202C Proseminar in Political Science II (2)

Required in Related Fields (16–18 units):

In History:

Select 8 units from following:

101ABC Western Civilization (4–4–4)

or

202AB United States Civilization (4–4)

In Economics:

200A Principles of Economics I (4)

or

301 Economics for Social Sciences (6)

In Philosophy:

250 Logic (4)

Upper Division

Required Courses (18 units):

In Political Science:

440 Jurisprudence and the Judicial Process (4)

441 American Constitutional Law: Federalism (4)

Select one proseminar (Political Science 491–496) outside area chosen for option (2 units).

In History:

479 Constitutional History of U.S. (4)

In English:

Select any 4-unit upper division course.

Electives (26 units):

Select from following blocks as indicated with approval of adviser.

(1) *Political Science*

Select two from following:

Political Science 305, 402–404, 414–419

Select one from each of following:

Political Science 442 or 443

Political Science 444, 445, or 446

(2) *Economics*

Select one from following:

Economics 302, 303, 310, 390, 471

(3) *Proseminars*

Select three from Political Science 491–496.

Note: Political Science 440 may be used to satisfy the upper division core requirements in the field of public law, and reduces the total units in this option by four.

International Relations Option

Two choices of programs are offered within this option. The Foreign Affairs program requires 38 units in upper division Political Science courses; the International Administration program requires 46 units in upper division Political Science courses. Both require study of a foreign language. These requirements are in addition to the core courses described above.

A. FOREIGN AFFAIRS**Lower Division**

Required in Political Science (2 units):

201C Proseminar in Political Science I (2)

or

202C Proseminar in Political Science II (2)

Required in Foreign Languages (12 units):

Select language with approval of adviser.

Upper Division

Required in Political Science (14 units):

425 United States Foreign Policy (4)

or

427 International Relations (4)

428 International Organization (4)

429 International Administration and Development (4)

Select one proseminar (Political Science 491–496) outside area chosen for option (2 units).

Electives in Political Science (24 units):

(1) Select four courses from at least three of the following areas:

Asia: Political Science 432, 437–439

Africa: Political Science 436

Latin America: Political Science 423, 431

Europe: Political Science 430, 433–435

(2) Select four proseminars from Political Science 491–496.

Political Science 425 or 427 may be used to satisfy upper division core requirements in International Relations and reduces total units in this option by four.

B. INTERNATIONAL ADMINISTRATION**Lower Division**

Required in Political Science (2 units):

201C Proseminar in Political Science I (2)

or

202C Proseminar in Political Science II (2)

Required in Foreign Language (12 units):

Select language with approval of adviser.

Upper Division

Required in Political Science (34 units):

- 425 United States Foreign Policy (4)
- 427 International Relations (4)
- 428 International Organization (4)
- 429 International Administration and Development (4)
- 463 Public Personnel Administration (4)
- 466 Public Financial Administration (4)
- 472 Organization and Management (4)
- 475 Comparative Administration (4)

Select one proseminar (Political Science 491–496) outside area chosen for option (2 units).

Electives in Political Science (12 units):

In Comparative Government:

Select 4-unit course on Africa, Asia, or Latin America with approval of adviser.

In Proseminars:

Select four courses from Political Science 491–496 with approval of adviser.

Political Science 425 or 427 may be used to satisfy upper division core requirements in International Relations and reduces total units in this option by four.

General Political Science Option

The following requirements are in addition to the core courses described above.

Lower Division

Required in Political Science (2 units):

- 201C Proseminar in Political Science I (2)

or

- 202C Proseminar in Political Science II (2)

Electives (12–14 units):

Select 12 units of a foreign language or 12–14 units from following:

In History (limit of 8 units):

- 101ABC Western Civilization (4-4-4)

In Economics:

- 200A Principles of Economics I (4)

or

- 301 Economics for Social Sciences (6)

Upper Division

Required in Political Science (2 units):

Select one proseminar (491–496) outside area chosen for option.

Electives (30 units):

In Political Science, Related Fields:

Select six courses in Political Science or related fields with approval of adviser; related fields limited to two courses.

In Proseminars:

Select three courses from Political Science 491–496 with approval of adviser.

Option for Single Subject Credential in Social Science

Electives in Political Science (16 units):

Select with approval of adviser.

Electives in Related Fields (24-28 units):

Lower Division

Select two courses from following:

- Anthropology 250, 260
- Chicano Studies 105
- Economics 150
- Geography 150, 160
- History 202AB
- Philosophy 220
- Psychology 150
- Sociology 250

Upper Division

Select one course from each of four of following fields:

- Anthropology 460, 461
- Economics 301, 390
- History 476, 480, 483
- Psychology 418AB, 422
- Sociology 415, 422, 430, 434, 441, 442, 444, 446, 448, 460

Public Administration Option

Programs for this option must have prior approval of an adviser. The option does not use the general core requirements described above, but incorporates foundations courses within a total of 24 units in lower division and 52 units in upper division courses. In upper division, all students have a general requirement of 20 units in breadth, plus a choice of 32 units of specialization in either General Management or International Public Administration. A total of 76 units is required.

Lower Division

Required in Political Science (8 units):

- 201AB Principles of Political Science I (2-2)

or

- 202AB Principles of Political Science II (2-2)
- 280 Quantitative Methods in Political Science (4)

Required in Related Fields (16 units):

Select from following:

In Anthropology:

- 250 Cultural Anthropology (6)

In Business:

- 202 Survey of Accounting (4)

In Chicano Studies:

- 101AB Bilingualism, Biculturalism and the Chicano (4-4)
- 105 Economic and Political Power of the Chicano (4)
- 111AB Introduction to Chicano Culture (4-4)
- 150 Chicano and Contemporary Politics (4)
- 201 Mexican Literature in Translation (4)
- 257 Folk Music Ensemble of Mexico (2)
- 258 Folk Dances of Mexico (1)

In Economics:

- 200A Principles of Economics I (4)
- 200B Principles of Economics II (4)

In Geography:

- 150 Human Geography (4)

In Pan-African Studies:

- 101 Introduction to Afro-American Studies (4)

120ABC Introductory Swahili I-III (4-4-4)

250AB African History (4-4)

251AB Afro-American History (4-4)

In Sociology:

201 Introductory Sociology (4)

Upper Division

Required in Political Science (12 units):

305 American Federal Government (4)

416 The Executive Process (4)

or

475 Comparative Administration (4)

460 Foundations of Public Administration (4)

Required in Political Science Fields (16 units):

(1) Select one course in each of *four* of following fields with approval of adviser. The required courses above may be used to meet field requirements in their respective categories, with alternative courses taken to meet total unit requirement.

Political Philosophy

Political Science 410, 411, 413

Theory and Methodology

Political Science 409, 421

Politics

Political Science 305, 402–404, 414–419

Political Science 305 and 403 or 200 fulfill General Education Area V (statutory) requirements in U.S. Constitution and California State and Local Government.

International Relations

Political Science 425, 427, 428, 429

Comparative Politics

Political Science 421, 423, 430–439, 446.

Legal Process

Political Science 440–446

Public Administration

Political Science 460, 461, 463, 465, 466, 470, 476

(2) Select two proseminars from Political Science 491–496.

(3) Select one of following emphases, either General Management or International Public Administration. Although each is shown as requiring 32 units, it is anticipated that 8 units will be met by courses from preceding segments of program.

A. General Management

Required in Political Science (16 units):

403 State or Local Government (4)

or

404 Urban Government and Politics (4)

463 Public Personnel Administration (4)

466 Public Financial Administration (4)

472 Organization and Management (4)

Electives (16 units):

Select from following, with approval of adviser.

In Political Science:

Political Science 416, 417, 461, 465, 470, 473, 475, 477

In Related Fields:

Select courses in Anthropology, American Studies, Biology, Chicano Studies, Criminal Justice, Geography,

History, Pan-African Studies, Psychology, Recreation, and Sociology with approval of adviser.

B. International Public Administration

Required in Political Science (20 units):

421 Comparative Politics (4)

or

427 International Relations (4)

429 International Administration and Development (4)

472 Organization and Management (4)

475 Comparative Administration (4)

One course in comparative politics (Africa, Asia or Latin America), selected with approval of adviser, may be satisfied with field requirement course.

Electives (12 units):

Select from following with approval of adviser.

In Political Science:

Political Science 416, 421, 425, 427, 428, 463, 466, 470, 473

In Related Fields:

Select courses in Anthropology, Biology, Business, Chicano Studies, Economics, Geography, History, Pan-African Studies, Psychology, and Sociology, with approval of adviser.

Minors in Political Science

The Department of Political Science offers three minor programs for students majoring in other fields. The General minor requires 31–32 units and may be of interest to majors in such related fields as history, economics, geography, sociology, anthropology, or English. The Pre-Law minor, which requires 18 units, is available to students who may be interested in attending law school. The minor in Public Administration also requires 18 units and is designed for students majoring in other disciplines who may be interested in government service at the local, state, or federal level after graduation. It is assumed that all students will have completed Political Science 150 or its equivalent prior to beginning one of the minor programs in Political Science.

General Minor

Lower Division

Required in Political Science (8–11 units):

200 California State and Local Government (3)

or

403 State and Local Government (4)

This course carries upper division credit.

201AB Principles of Political Science I (2-2)

202AB Principles of Political Science II (2-2)

Upper Division

Required in Political Science (20–24 units):

Select five additional courses with approval of adviser to meet goal for which minor was chosen.

Pre-Law Minor

Required in Political Science (10 units):

440 Jurisprudence and the Judicial Process (4)

441 American Constitutional Law: Federalism (4)

494 Proseminar in Legal Process (2)

Electives in Political Science (8 units):

Select one from following:

442, 443

Select one from following:

444, 445, 446

NOTE: Specific courses should be chosen in consultation with a pre-law adviser.

Public Administration Minor

Required in Political Science (6 units):

460 Foundations of Public Administration (4)

496 Proseminar in Public Administration (2)

Electives in Political Science (12 units):

Select one from following:

305, 403

Select two from following:

461, 463, 466, 472

NOTE: Specific courses should be chosen in consultation with a public administration adviser.

The Credential Program

The Bachelor of Arts degree in Political Science has been submitted for approval to the Commission for Teacher Preparation and Licensing for examination waiver for the single subject credentials in Government and in Social Science. Students should consult advisers in the department and in the School of Education.

Courses of Instruction

Lower Division Courses

150 Government and American Society (4)

American political system with emphasis on role and function of government in social context of a democratic political system. Satisfies U.S. Constitution and California state and local government requirements. Not open to students who have completed college introductory course in U.S. government.

200 California State and Local Government (3)

Functions and structure of California state and local government units, current aspect of governmental process and problems in State. Satisfies California state and local government requirement.

201AB Principles of Political Science I (2-2)

Prerequisite: Sophomore standing. Scope and methods of political science; focal concepts, theories, philosophies, ideologies; the modern state, public law, public administration, public opinion and government.

201C Proseminar in Political Science I (2)

Prerequisite: To be taken in conjunction with Political Science 201AB. Special projects in directed research.

202AB Principles of Political Science II (2-2)

Prerequisite: Political Science 201AB or equivalent. Comparative government and politics, international relations.

202C Proseminar in Political Science II (2)

Special projects in directed research. Must be taken concurrently with Political Science 202AB.

250 World Politics (4)

Theories, principles, and practice of international relations; examination of role of nationalism, diplomacy, war alliances, international law and organizations in current international problems.

280 Quantitative Methods in Political Science (4)

Prerequisites: One year of college political science; Mathematics 101 or equivalent or satisfactory performance on Mathematics Placement Examination given during registration period. Descriptive and inferential statistics; emphasis on practical applications in political science. Distributions on a single variable, associations between two variables, tests of hypotheses; bivariate computer analysis, and individual projects.

Upper Division Courses

305 American Federal Government (4)

Structure, organization, and functioning of executive, administrative, legislative, judicial, electoral processes and public policies of United States national government. Satisfies U.S. Constitution requirement.

395 Community Service in Political Science (1-4)

Prerequisites: Political Science 150 or equivalent, prior approval of Political Science department adviser in consultation with the EPIC Director, and acceptance by a community agency. Participation in work of a community agency or activity utilizing professional or vocational skills in service to community. Credit not applicable toward political science major. Graded CR/NC only. May be repeated to maximum of 9 units.

398 Cooperative Education (1-3)

Prerequisite: Active, approved employment under government internship program. Analysis and reports of student's performance, regular group meetings. Graded CR/NC only.

402 Public Opinion and Electoral Behavior (4)

Prerequisites: Political Science 150 and 201AB, or equivalents. Attitude formation in relation to primary and general elections in the United States.

403 State and Local Government (4)

Prerequisite: One year of college political science or consent of instructor. Nature of state politics, analysis of legislative, judicial, and administrative organization and process; local government in metropolitan areas; all with reference to California.

404 Urban Government and Politics (4)

Prerequisite: One year of college political science or consent of instructor. Contemporary American municipal, county, and special districts, and their relationships to other governmental jurisdictions, particularly state governments; problems of legislature, elections, politics, parties, and interest groups; metropolitan government.

409 Foundations of Empirical Political Theory (4)

Prerequisites: Senior standing in political science major, or graduate standing; 16 units of upper division political science courses. Values and limitations in past and current applications of philosophy and methods of science to study of politics.

410 Classical Political Theory (4)

Prerequisite: One year of college political science or consent of instructor. Exposition and critical analysis of ideas of major political thinkers from Plato to seventeenth century.

411 Modern Political Theory (4)

Prerequisite: One year of college political science or consent of instructor. Studies in character of contemporary normative political theory; systematic political theories of Liberalism, Conservatism, Nationalism, Marxism, Communism, Fascism, Socialism, Democracy, and Irrationalism.

413 American Political Thought (4)

Prerequisite: One year of college political science or consent of instructor. Survey of American political ideas from Puritan period to present.

414 Interest Groups (4)

Prerequisite: One year of college political science or consent of instructor. Nature and functions of political interest groups, emphasizing their influence on political processes in the United States.

415 Political Sociology (4)

(Also listed as Sociology 415)

Prerequisite: One year of college political science and/or sociology, or consent of instructor. Social factors underlying democracy and totalitarianism, social movements and revolutions, conflict and conflict resolution, voting behavior, political socialization.

416 The Executive Process (4)

Prerequisite: Four units of upper division political or other social science, or consent of instructor. Studies in theory and operation of the executive process at all levels of government.

417 Public Policy and the Economy (4)

Prerequisite: One year of college political science or consent of instructor; Economics 201A or equivalent recommended. Analysis of interrelationships between public policy and economic affairs.

418 American Political Parties and Politics (4)

Prerequisite: One year of college political science or consent of instructor. American political parties, including third parties; party structure, operation, control, and political leadership.

419 Legislative Process (4)

Prerequisite: One year of college political science or consent of instructor. Analysis of structure, organization, and functioning of United States Congress and American state legislatures, emphasizing California.

421 Comparative Politics (4)

Prerequisites: One year of college political science or consent of instructor. An analysis of various objectives, approaches, components, and classifications for comparing political systems and processes.

423 Political Dynamics of Latin America (4)

Prerequisite: One year of college political science or consent of instructor. Integrated analysis of political culture and institutions of Latin America.

425 U.S. Foreign Policy (4)

Prerequisite: One year of college political science or consent of instructor. Theory and practice of contemporary American foreign policy.

427 International Relations (4)

Prerequisite: One year of college political science, including Political Science 202AB, or consent of instructor. Theories and practice of international politics.

428 International Organization (4)

Prerequisite: One year of college political science or consent of instructor. Organizations, methods, movements, and practices leading to world order, including problems and evaluations.

429 International Administration and Development (4)

Prerequisite: One year of college political science or consent of instructor. Administration of overseas operations and international agencies; policies, practices, procedures and problems.

430 Governments of Western Europe (4)

Prerequisite: One year of college political science or consent of instructor. Political institutions, ideologies, and problems of major European countries.

431 Governments of Latin America (4)

Prerequisite: One year of college political science or consent of instructor. Political concepts, structures, and trends in governments of Mexico, Brazil, Argentina, Chile, and other countries selected for study by instructor.

432 Government and Politics of Southeast Asia (4)

Prerequisite: One year of college political science or consent of instructor. Political development, systems, institutions, concepts, trends, contemporary practices and foreign relations of selected countries of Southeast Asia.

433 British Government and Commonwealth (4)

Prerequisite: One year of college political science or consent of instructor. Examination and analysis of British political system, including the Commonwealth.

434 Government and Politics in Scandinavia (4)

Prerequisite: One year of college political science, including Political Science 202AB or consent of instructor. Examination of Scandinavian political systems, parties, programs, policies, concepts, and reforms; struc-

tures and functions of political, social, and economic institutions.

435 Government of Soviet Union (4)

Prerequisite: One year of college political science or consent of instructor. Political institutions, movements, doctrines, and practices of the Soviet Union.

436 Governments of Sub-Saharan Africa (4)

Prerequisite: One year of college political science or consent of instructor. Analysis of Africa's political and social history; contemporary governmental institutions and politics of selected countries south of the Sahara; Africa in world affairs.

437 Governments and Politics of South Asia (4)

Prerequisite: One year of college political science, including Political Science 202AB, and History 490A or 490B, or consent of instructor. Political movements, systems, and policies in India and Pakistan, with particular attention to nationalism, constitutional development, political parties and movements, and foreign policies.

438 Government and Politics of Japan (4)

Prerequisite: One year of college political science, including Political Science 202AB and History 495A or 495B, or consent of instructor. Political ideas and institutions in Japan, with emphasis upon nationalism, constitutional development, political parties and movements; domestic and foreign policies.

439 Government and Politics of China (4)

Prerequisite: One year of college political science, including Political Science 202AB and History 494A or 494B or consent of instructor. Political ideas and institutions in China, Nationalist and Communist, with specific emphasis upon nationalism, communism, constitutional development, political parties, economic planning, and foreign policies.

440 Jurisprudence and the Judicial Process (4)

Prerequisite: One year of college political science or consent of instructor. Analysis of schools of legal thought, judicial process and judicial behavior, relationship of jurisprudence to judicial process.

441 American Constitutional Law: Federalism (4)

Prerequisite: One year of college political science or consent of instructor. Basic principles of American constitutional law; the Supreme Court and judicial review; the Supreme Court and problems of federalism.

442 American Constitutional Law: Civil Rights (4)

Prerequisite: One year of college political science or consent of instructor. Basic principles of American constitutional law; First Amendment rights; equal protection of the laws as applied against state and national governments.

443 American Constitutional Law: Civil Rights in Legal Process (4)

Prerequisite: Political Science 441 or consent of instructor. Basic principles of American constitutional law; federal constitutional rights of persons accused of

crimes as applied against state and national governments.

444 Anglo-American Legal System (4)

Prerequisite: One year of college political science or consent of instructor. Development of American legal system from Anglo-Saxon and Roman roots to a case system of law and equity based on English and American common law.

445 Judicial Behavior (4)

Prerequisites: Political Science 280 and 440, or consent of instructor. Judicial behavior, analysis of the objectives, approaches, methods, and subject matter.

446 Comparative Legal Systems (4)

Prerequisites: One comparative government course and one public law course (preferably Political Science 440). Survey and systematic analysis of selected legal systems and functional relationships with social systems. Emphasis upon social context of legal systems and comparative approach to their study.

460 Foundations of Public Administration (4)

Prerequisite: One year of college political science or consent of instructor. The executive function in government; principles of administrative organization, personnel management, financial administration, administrative law, public relations; problems and trends in government as a career.

461 Municipal Administration (4)

Prerequisite: One year of college political science or consent of instructor. Problems and functions of such units of local government as municipalities, counties, special districts, school districts, and such administrative agencies as housing authorities, police, fire, and public health departments.

463 Public Personnel Administration (4)

Prerequisite: Political Science 150 or equivalent, or consent of instructor. Growth of merit system concept and development of civil service; recruitment procedures and examinations, position classification, salary structures, retirement plans, in-service training, supervision, employee organizations.

465 Principles of Employee Supervision (4)

Prerequisite: Consent of instructor. Discussions on government employee situations and problems from point of view of lower-level supervisor.

466 Public Financial Administration (4)

Prerequisite: One year of college political science; accounting and statistics recommended. Role of financial administration and budgeting in determination of governmental policy, administrative planning and management, control of government operations, intergovernmental relations, and relation to private economy.

468 Administration of Social Security Programs (4)

Prerequisite: Upper division standing or consent of instructor. Program and administrative aspects of Federal Social Security system; workmen's compensation,

unemployment insurance, Medicare, Medicaid, and Medi-Cal programs; federal anti-poverty program; public assistance, vocational rehabilitation; intergovernmental relations in the social security and public welfare field; emergency welfare services, including plans for nuclear attack.

470 Public Relations in Government (4)

Public relations as a staff function; roles of information officer, public service features, public information counters; agency case histories.

472 Organization and Management (4)

Prerequisite: Political Science 460AB or consent of instructor. Organization structure, human factors in organization, dynamics of organizational change, internal adaptability to external environment; problems, limitations, and trends in governmental organization and management.

473 Systems Design in Government (4)

Prerequisite: Political Science 472AB or consent of instructor. Conceptualization, design, analysis and implementation of man-machine systems in government; automation of information processing, retrieval, and communication; theories of computers, operations research and related concepts.

475 Comparative Administration (4)

Prerequisite: One year of college political science or consent of instructor. Theories of comparative administrative systems analysis and their application to selected administrative systems in the United States and foreign countries; emphasis on relationships between administrative institutions and their environment.

476 Administrative Law (4)

Prerequisite: One year of college political science or consent of instructor. Process in administrative adjudication, regulation, and rulemaking; duties and liabilities of public officers, appeal procedures, trends in regulation.

477 Introduction to City Planning (4)

Prerequisites: Political Science 403 and 460AB or consent of instructor. Functions and administrative structures of city, county, regional and state planning agencies; economic, social, legal and esthetic factors in planning process; development of general or master plan.

480 Advanced Quantitative Methods in Political Science and Public Administration (4)

Prerequisite: Political Science 280 or equivalent. Appli-

cation of quantitative methods to government data, experimental and non-experimental research design, sampling, scale and index construction, multivariate statistics and computer analysis; individual projects.

490 Special Studies in Political Science (4)

Prerequisite: One year of college political science or consent of instructor. Intensive study of selected areas and special problems in Political Science. May be repeated as subject matter changes.

491 Proseminar in American Government and Politics (2)

An elective course to be taken in conjunction with courses in American Government and Politics as specified by an adviser. Special projects in directed research. May be repeated.

492 Proseminar in International Relations (2)

An elective course to be taken in conjunction with courses in International Relations as specified by an adviser. Special projects in directed research. May be repeated.

493 Proseminar in Comparative Government (2)

An elective course to be taken in conjunction with courses in comparative government as specified by an adviser. Special projects in directed research. May be repeated.

494 Proseminar in Legal Process (2)

An elective course to be taken in conjunction with courses in public law as specified by an adviser. Special projects in directed research. May be repeated.

495 Proseminar in Political Theory (2)

An elective course to be taken in conjunction with courses in political theory as specified by an adviser. Special projects in directed research. May be repeated.

496 Proseminar in Public Administration (2)

An elective course to be taken in conjunction with courses in public administration as specified by an adviser. Special projects in directed research. May be repeated.

499 Undergraduate Directed Study (1-4)

Prerequisites: A g.p.a. of 3.0 in Political Science, consent of an instructor to act as sponsor, ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

Psychology

In School of Letters and Science

The Department of Psychology offers programs leading to the Bachelor of Arts, Master of Science, and Master of Arts degrees in Psychology. The graduate degrees are described in the *Graduate Programs* section.

The Faculty

Professors: Richard Balvin, Richard Cannicott, Annette Ehrlich, Herbert Goldberg, Herbert Goldenberg, Thomas Graham, L. M. Gustafson, John Haralson, Alfred Jacobs, Vernon Kiker, Seymour Levitan, Robert Lewis, Irwin Lublin, Herbert Moskowitz, David Perrott, Joseph Phelan, Ann Richardson, Leonard Schneider, Bernard Somers, Alice Thompson.

Associate Professors: William Beckwith, Nancy Cobb, David Fitzpatrick, Michael Gaston, Patricia Hodges, Emanuel Lask, John Leiman, Judith E. Stevens-Long, Jerry Tate (Chairperson).

Assistant Professors: Burton L. Alperson, Erma D. Alperson, Jarrett S. Boone, Stuart P. Fischhoff, Harold Gottlieb, Cynthia Gray, Edwin M. Greenberg, Estelle Gregory, Richard Holroyd, R. D. Hutchinson, Carl Lauprecht, David M. Lawrence, Anson Levine, Z. Barry Lowenkron, Michael Roffe, Sidney Roth, Michael Wapner, David Weiss.

The Undergraduate Program

The Bachelor of Arts degree in Psychology is available in two options. The first, the General Option, is intended to prepare students for graduate professional training as psychologists, while offering opportunity for specialized training in such areas as counseling and industrial psychology. The second option for the Single Subject Credential in Social Science is intended for students who are interested in pursuing a teaching career.

Advisement

Students majoring in Psychology must select a departmental adviser by the end of the first quarter of the junior year to draw up an official degree program.

Requirements for the Major

The core requirements for both options consist of a minimum of 25 units of lower division courses and 17 units of upper division Psychology courses. The General Option requires a total of 74 units of which 20-32 are in upper division Psychology courses. The Option for the Single Subject Credential in Social Science requires a total of 44-48 units beyond the core requirements.

Core Requirements

Lower Division

Required Courses (13 units):

In Psychology:

150 Human Behavior (4)

201 Elementary Physiological Psychology (4)

201L Laboratory Demonstration in Physiological Psychology (1)

202 Descriptive Statistics in Psychology (4)

In addition to beginning study of Psychology, students must take supporting work in sciences, mathematics, and social sciences. Some general education requirements may be met with these courses.

Required Support Courses (12-15 units):

Students select one course from physical sciences, one from biological sciences, and a third course from either group of sciences or from the humanities and social sciences group listed below. Credit will not be given for a second course which covers essentially the same content as a course already taken, e.g. Chemistry 101-102 and 151-152.

A. Physical Sciences

In Chemistry:

101-02 General Chemistry I, II (5-5)

151 Fundamentals of Chemistry I (5)

152 Fundamentals of Chemistry II (5)

In Physics:

101-02 Physics I, II, (4-4)

150 Principles of Physics (4)

B. Biological Sciences

In Biology:

101 Biology of Animals (5)

151 Principles of Population Biology (4)

152 Principles of Zoology (4)

200A Human Anatomy and Physiology (5)

200B Human Anatomy and Physiology (5)

C. Humanities and Social Sciences

In Anthropology:

250 Cultural Anthropology (6)

260 Physical Anthropology (4)

In Philosophy:

250 Logic (4)

Recommended Courses (0-12 units):

Psychology majors are urged to develop competence in one modern foreign language.

Upper Division

Required in Psychology (17 units):

302 Statistical Methods in Psychology (5)

304AB Experimental Psychology (4-4)

308 Contemporary Psychology (4)

General Option

Required in Psychology (20 units):

Five courses in Psychology, to be taken from the following two categories:

(1) Select at least *two* of following:

401 Physiological Psychology (4)

408 Comparative Psychology (4)

423 Motivation and Emotion (4)

424A Learning: Basic Processes (4)

425 Sensation and Perception (4)

(2) Select at least *two* of following:

410AB Abnormal Psychology (4-4)

412AB Psychology of Human Development:

Childhood and Adolescence (4-4)

418AB Personality: Theory and Research (4-4)

422 Social Psychology (4)

430 Introduction to Psychological Measurement (4)

442 Industrial and Organizational Psychology (4)

Electives (0-12):

Select additional courses in psychology or related areas with approval of adviser and department, to complete major with minimum of 74 units.

Option for Single Subject Credential in Social Science

Required in Psychology (20 units):

412A Psychology of Human Development (4)

418A Personality: Theory and Research (4)

422 Social Psychology (4)

423 Motivation and Emotion (4)

424A Psychology of Learning: Basic Processes (4)

Electives in Related Fields (24-28 units):

Select from following groups with at least one course from each; at least 8 units must be taken in courses dealing with ethnic diversity:

Anthropology 250, 260, 433, 435, 439, 460, 461, 462

Chicano Studies 150, 430

Geography 150, 160, 415, 422, 446, 453, 467, 477, 478

History 480, 483

Pan-African Studies 252AB, 301AB, 302, 340, 410, 414, 420, 440AB, 460

Political Science 250, 414, 415, 417, 418, 446

Sociology 415, 430, 434, 441, 442, 444, 446, 448, 460, 472

Minor in Psychology

A minor in Psychology is available for students majoring in other fields. A minimum of 32 units of lower and upper division courses in Psychology is required.

Lower Division

Required in Psychology (8 units):

150 Human Behavior (4)

201 Elementary Physiological Psychology (4)

Upper Division

Required in Psychology (9 units):

302 Statistical Methods in Psychology (5)

304A Experimental Psychology (4)

Electives in Psychology (15 units):

Select upper division courses, with approval of adviser.

The Credential Program

The Bachelor of Arts degree program in Psychology with the option for the single subject credential in Social Science has been submitted for approval to the Commission for Teacher Preparation and Licensing for examination waiver for this credential.

Courses of Instruction

Lower Division Courses

150 Human Behavior (4)

History of efforts to understand human behavior; encourages appreciation of scientific method and readiness to apply it to problems of human behavior.

201 Elementary Physiological Psychology (4)

Prerequisite: Psychology 150. Relations of behavioral and physiological processes. Covers neuro-anatomy; sensory, muscular and glandular structures and functions in relation to learning, perception, motivation and emotion.

201L Laboratory Demonstration in Elementary Physiological Psychology (1)

Prerequisite: Psychology 201 must be taken prior to or concurrently with Psychology 201L. Laboratory procedures for physiological psychology. Introduction to instruments used, organisms studied, and processes investigated. Required of majors; optional with others.

202 Descriptive Statistics in Psychology (4)

Prerequisites: Psychology 150 and completion of General Education requirement in Quantitative Reasoning. Basic numerical and graphical methods in psychology; statistical notation, data presentation, measures of central tendency and variability, introductory probability.

218 Psychology of Adjustive Behavior (3)

Prerequisite: Psychology 150. Social and emotional adjustment and personality; interpersonal and intrapersonal relationships; emphasis upon healthy personality.

Upper Division Courses

Psychology 150 is a general prerequisite for all upper division courses.

302 Statistical Methods in Psychology (5)

Prerequisite: Psychology 202 or equivalent. Binomial and other probability distributions; covariance and correlation, regression; confidence intervals and hypothesis testing; t, F, and Chi Square distributions.

304AB Experimental Psychology (4-4)

Prerequisite: Psychology 302. Emphasis on problems of research design and experimental techniques in (a) psychophysics, scaling, sensation and perception, and (b) learning, motivation and emotion. Lecture 3 hours, laboratory 3 hours.

308 Contemporary Psychology (4)

Contemporary psychological theories and systems in their historical perspective and present position.

326 Psychological Factors in Marriage (4)

Problems of money, in-laws, sex, etc., with emphasis on the psychological insights necessary for adjustment to self and others, and to social and cultural institutions.

354 Selected Topics in Psychology (1-6)

Prerequisite: As needed for specific topic. Current topics of special interest to students in psychology. Subject announced in *Schedule of Classes*. May be repeated for credit.

395 Field Experience in Psychology (1-4)

Prerequisites: At least 9 units in Psychology; Psychology 304AB and 308 suggested but not specifically required; prior consent of instructor and approval of department chairman. Opportunity through observation and participation to study psychological principles in naturally occurring behavioral situations. May involve animals in non-laboratory situations or human beings in community, clinical, or other institutional settings. Graded CR/NC only. May be repeated to maximum of 8 units.

401 Physiological Psychology (4)

Prerequisite: Psychology 201. Relationship between integrated behavior and physiological processes. Theories relating psychology and physiology.

404 Advanced Experimental Psychology (2)

Prerequisite: Psychology 302. Offered in multiple sections with the content of each section correlated with the content of a specific course in the 400 series. Consideration of advanced problems of research design and experimental techniques. Emphasis on individual projects; 6 hours laboratory. May be repeated for credit.

405 Group Methods for Psychological Intervention (4)

Prerequisite: Upper division standing; Psychology 441 recommended. Survey of traditional and contemporary theories and techniques employing group methods for psychotherapy, facilitation of personal growth, and modification of social systems.

406 Mental Retardation (4)

Nature and causes of mental retardation; physiological and psychological characteristics. Problems of social control, including education, social adjustment, institutionalization, and community responsibility.

408 Comparative Psychology (4)

Prerequisite: Psychology 304AB or other background in scientific methodology strongly recommended. Comparison of behavior of organisms from one-celled types to humans. Emphasis on processes underlying evolution of behavior; topics include social behavior, learning, ethnological and developmental aspects of animal behavior.

410AB Abnormal Psychology (4-4)

Historical overview of abnormal psychology; disturbing forces in personality formation; criteria of abnormal behavior; symptomatology; therapeutic considerations.

411 Research Methodology in Psychology (4)

Prerequisite: Psychology 302. Problems in measurement of psychological variables; various design models for experimental methods of research and naturalistic observation methods of research.

412AB Psychology of Human Development: Childhood and Adolescence (4-4)

412A: Scientific approach to understanding of behavior of children from infancy to age six; use of empirical evidence for conclusions about child's behavior.

412B: Scientific approach to childhood and adolescence; implications of research findings for child-rearing practices. Late childhood, adolescence, young adulthood.

413 Statistical Methods in Psychology (4)

Prerequisite: Psychology 302. Mathematical and psychological bases of sampling distributions; *chi-square*, *t* and *f* statistics in testing hypotheses about such sampling distributions; various statistical models in correlation analysis.

414 Analysis of Variance (4)

Prerequisite: Psychology 302; 413 recommended. Various analysis-of-variance models in analysis and interpretation of psychological data.

416 History of Psychology (4)

Prerequisite: One year of college psychology. Psychology 308 recommended for Psychology majors. Consideration of historical development of psychology from its origins in ancient philosophy and science to end of nineteenth century.

418AB Personality: Theory and Research (4-4)

Prerequisite: Psychology 218 recommended. Biological and cultural determinants of personality. Dimensions of personality, description and evaluation of major theories, research issues, and methods.

419 Psychology of Women (4)

Prerequisite: Some background in experimental methodology. Psychological and physiological determinants of sex difference in behavior; emphasis on development of sex-role identity and interpersonal interactions of women.

420 Psychology of Communications (4)

Psychological aspects of interchange of human thoughts and concepts. Methods of studying communications. Relationships between communications and personal adjustment, industrial problems, leadership, mass media.

422 Social Psychology (4)

Introduction to methods and content of social psychology; social behavior, socialization, communication, attitudes and beliefs; behavior in small and large groups. Emphasis upon methods and measurements. Students may take either Psychology 422 or Sociology 422 in the Psychology major; the other may be taken for credit outside major.

423 Motivation and Emotion (4)

Prerequisites: Psychology 201 and 304AB. Critical examination of drives, needs, preferences, desires, feelings and emotions from experimental and theoretical perspectives.

424A Psychology of Learning: Basic Processes (4)

Prerequisite: Consent of instructor; Psychology 304AB and 401 recommended. Fundamental principles of classical and instrumental conditioning. Emphasis on experimental findings, with consideration given to theoretical formulations that apply to simple forms of learning.

424B Psychology of Learning: Complex Processes (4)

Prerequisite: Psychology 424A. Consideration of methods and experimental evidence in investigation of acquisition, retention and transfer of motor and verbal tasks. Concept attainment, problem solving and thinking.

425 Sensation and Perception (4)

Prerequisites: Psychology 201 and 304AB. Examination of theories and experimental literature with respect to variables which determine the organism's ability to respond differentially to sense data.

426 Family Therapy Dynamics and Perspectives (4)

Prerequisite: Psychology 410A or 418A. Historical evolution of concepts and theoretical perspectives in family processes; treatment approaches; significant issues in family life.

428 Introduction to Analysis of Behavior (4)

Basic paradigms of learning and their application to clinical setting for behavior modification. Analysis of social learning, techniques of programmed learning, explanation of behavior and ethics of behavior control.

430 Introduction to Psychological Measurement (4)

Prerequisite: Mathematics 102 or consent of instructor. Basic concepts of measurement and scaling theory, correlational methods, regression and prediction, reliability and validity, and test construction. Lecture 3 hours, laboratory 3 hours.

431 Psychology of Individual Differences (4)

Prerequisite: Psychology 430. Constructing psychological tests, group and individual; use and interpretation of test manuals; theoretical issues in individual differences; introduction to interpreting test findings; problems of test administration, group and individual. Lecture 3 hours, laboratory 3 hours.

432 Psychology of Language Behavior (4)

Prerequisite: Psychology 420. Contributions of behavioral and cognitive approaches to study of language, nonverbal communication, animal communication, social systems as matrices of communication, progressions and pathologies of verbal behavior.

433 Psychology of Cognitive Development (4)

Prerequisite: Psychology 412A; Psychology 420 or Speech Communication 456 recommended. Evaluations of cognitive processes from simple organisms to adult humans, comparative psychology of linguistic reference, relationship of thought and language to apprehension of reality; behaviorist, cognitive, phenomenological approaches.

436AB Theory and Techniques in Counseling (4-4)

Prerequisite: Senior or graduate standing; Psychology 410AB or 418AB recommended. Introduction to problems, techniques and theoretical systems of counseling. Study of counselor and counselee attitudes and behavior through class discussion, use of counseling interviews.

438 Introduction to Clinical Psychology (4)

Prerequisites: Psychology 410AB and 430 or consent of instructor. Survey of clinical psychology and its methods, designed primarily for students considering careers in area. Methods and problems involved in assessment of persons, psychotherapy and research.

439 Environmental Perception (4)

(Also listed as Geography 439)

Role of perception in landscape evaluation. Lecture 2 hours, laboratory 4 hours.

440 Theory and Measurement of Attitudes and Opinions (4)

Prerequisite: Psychology 422. Conceptualization and measurement of attitudes, beliefs, and opinions. Theories of belief systems, attitude formation and change; implications of research findings. Individual and/or class research projects.

441 Psychology of Small Group Behavior (4)

Prerequisites: Psychology 422 and Sociology 250. Historical development and theoretical implications of research in small group structure and process. Emphasis on cohesiveness, conformity, power, inter- and intra-group conflict and cooperation as aspects of structure and process.

442 Industrial and Organizational Psychology (4)

Interaction of employees and their organizations. Individuals and their motivation to work; groups, communication in industrial organizations; human factors research; psychological principles applied to personnel problems; psychology of work.

445 Community Psychology (4)

Principles of social and clinical psychology; role of psychologist in analysis of social systems; community organization, social planning, and community change; methodology and basic concepts of community mental health.

446 Employment and Personnel Psychology (4)

Prerequisite: Psychology 302 or 430 or equivalent course in statistics. Psychological principles of individual differences applied to problems of developing recruitment, selection and testing programs; supervisory training and executive development; measurement of employee attitudes and morale; job evaluation and motivation.

447 Human Performance in Man-Machine Systems (3)

Prerequisite: Psychology 304A or consent of instructor. Survey of basic research on human performance; processing of discrete and continuous information; decision-making, vigilance, environmental effects on human performance.

448 Psychology of Labor-Management Relations (4)

Prerequisite: Psychology 422 or 442 or consent of instructor. Perceptual and motivational factors influencing behavior of workers, executives, union officers. Psychological factors in strikes; principles relevant to union-management cooperation.

454 Special Topics in Psychology (1-6)

Prerequisites: As needed for specific topic. Current topics of special interest to students in psychology. Subject announced in *Schedule of Classes*. May be repeated for credit as subject matter changes.

462 The Psychology of Human Development: Maturity and Aging (4)

Prerequisite: Upper division standing; Psychology 412AB recommended. Psychological factors in behavior during middle and later years, including physical and mental health problems, role changes, successful adjustment patterns, and family and community relationships in successive adult age groups.

485 Directed Field Experience in Community Clinical Psychology (4)

Prerequisites: Consent of instructor, agency acceptance; one of following: Psychology 428, 436, 405, 445; one of following: Psychology 438, 410, 418, (may be taken concurrently). Principles of psychology applied to community service; lecture, discussion, and supervised experience in community institutions, hospitals, schools, social service agencies. Grade CR/NC only. May be repeated to maximum of 8 units.

499 Undergraduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Project selected in conference with sponsor before registration; progress meetings held regularly, and a final report submitted. Graded CR/NC only. May be repeated for credit.

Recreation

In School of Fine and Applied Arts

The interdisciplinary program in Recreation provides a bachelor's degree which prepares students for a variety of positions in recreation. The master's degree program is described in the *Graduate Programs* section.

The Faculty

The faculty for this program is provided by the cooperating academic departments, in addition to faculty members in Recreation listed below. James G. Dunkelberg, Professor of Physical Education, serves as Coordinator.

Professors: Patricia A. Delaney, Marion J. Olsen, Albert A. Tillman, George W. Willott.

Assistant Professors: Carol G. McKenzie, Robert E. Meyers, Jr.

The Undergraduate Program

The Bachelor of Science degree in Recreation is designed to prepare students for employment in public or group work agencies, in correctional or rehabilitation institutions, and in industrial recreation, and provides the foundational training necessary for entrance into graduate study.

Requirements for the Major

The major in Recreation requires 96 units, of which 48 are in Recreation and 48 in related fields. Within this program, a minimum of 33 units in Recreation and 20 units in related fields comprise the core, and the remaining 43 units are used for development of individual interests.

Students are cautioned that some required and elective courses have prerequisites. Some of these prerequisites fulfill General Education requirements.

Required Core Program

The core program consists of 12 units of lower division and 21 units of upper division courses in Recreation, 12 units selected from specified courses in related fields, and 8 units in electives in related fields, for a total of 53 units.

Lower Division

Required in Recreation (12 units):

- 260 Recreation and Leisure Services (3)
 - 280 Theories and Techniques of Recreation Leadership (2)
 - 281 Practicum in Recreation Leadership (1)
- Select 6 units from following, with approval of adviser:
- 201 Sports and Games (2)
 - 202 Social Recreation (2)
 - 203 Outdoor Recreation (2)
 - 204 Dance in Recreation (2)

Upper Division

Required in Recreation (21 units):

- 331 History and Philosophy of Recreation and Leisure Services (3)

- 344 Program Development of Recreation and Leisure Services (3)
- 360 Organizational Patterns of Recreation and Leisure Services (3)
- 361 Administration and Supervision of Recreation and Leisure Services (3)
- 380 Directed Field Work in Recreation (6)
- 495 Proseminar: Recreation and Leisure (3)

Required in Related Fields (12 units):

In Business:

- 307 Management and Organizational Behavior (4)

In Political Science:

- 460 Foundations of Public Administration (4)
- 472 Organization and Management (4)

Electives in Related Fields (8 units):

With approval of adviser and attention to prerequisites, select 8 units in courses appropriate to Recreation from at least two of the following areas: art, Chicano studies, drama, industrial studies, music, Pan-African studies, physical education, speech communication. Courses used to satisfy this portion of the major may not also be used to satisfy General Education requirements, although prerequisites may.

In addition to the required and elective courses for the core, students select 43 units of electives, of which 15 are in Recreation and 28 are in related fields.

Electives in Recreation (15 units):

Select at least 6 units from the following, with approval of adviser and attention to prerequisites.

- 412 Recreation and Leisure Services in the Urban Setting (3)
- 422 Institutional Recreation and Leisure Services (3)
- 423 Public Recreation and Leisure Services (3)
- 424 Voluntary Recreation and Leisure Services (3)
- 445 Planning and Promotion of Special Events (3)
- 461 Community and Public Relations in Recreation (3)
- 471 Recreation for the Handicapped (3)
- 472 Recreation Therapy (3)

Select at least 9 units from additional 400-level courses other than 480 and 499, with approval of adviser.

Electives in Related Fields (28 units):

Select at least 16 units from one of the following areas, with approval of adviser.

A. Business and Political Science

In Business:

- 461 Management Theory and Practice (4)

In Political Science:

- 403 State and Local Government (4)
 461 Municipal Administration (4)
 463 Public Personnel Administration (4)
 465 Principles of Employee Supervision (4)

B. Journalism and Social Sciences

In Journalism:

- 494 Reporting of Public Affairs (4)
 496 Publicity and Public Relations (4)
 497 Public Relations Problems (4)

In Political Science:

- 470 Public Relations in Government (4)

In Psychology:

- 420 Psychology of Communications (4)

In Sociology:

- 424 Mass Communication and Public Opinion (4)

C. Special Education and Behavioral Sciences

In Anthropology:

- 444 Medical Anthropology (4)

In Special Education:

- 400 Education and Psychology of Exceptional Individual (4)
 461 Art, Music, and Recreation for Physically Handicapped (4)
 462 Survey of Physical Defects (3)

In Sociology:

- 425 Medical Sociology (4)
 447 Sociology of Occupations and Professions (4)

With approval of adviser, and attention to prerequisites, select at least 12 units in additional support courses, including but not limited to art, astronomy, biology, business, Chicano studies, drama, education, engineering, English, geology, health and safety studies, music, nursing, Pan-African studies, physical education, political science, psychology, sociology, speech communication, and urban studies. Courses used to satisfy this portion of the major may not also be used to satisfy General Education requirements, although prerequisites may.

Courses of Instruction

Lower Division

200 Series: Recreation Principles and Activities (2 each)

Methods, techniques, materials, and fundamental skills of recreational activities as utilized in organized programs of recreation and leisure services for various groups and settings. Lecture 1 hour, activity 2 hours; additional field observation.

- 201 Sports and Games
 202 Social Recreation
 203 Outdoor Recreation
 204 Dance in Recreation

260 Recreation and Leisure Services (3)

Identification and analysis of various agencies providing organized programs of recreation and leisure services. Emphasis upon functions, areas, facilities, clientele, career opportunities. Field visits required.

280 Theories and Techniques of Recreation Leadership (2)

Prerequisites: Concurrent enrollment in Recreation 281; completion of required courses in Recreation 201–204 series. Roles of recreation leader in face-to-face and group relationships; overall program leadership. Emphasis on various types of groups; application of leadership techniques. Lecture 1 hour, demonstration laboratory 2 hours.

281 Practicum in Recreation Leadership (1)

Prerequisite: Concurrent enrollment in Recreation 280. Observation and participation in recreation leadership. Volunteer experience in variety of recreational settings; field work at approved agency, 4 hours per week minimum.

Upper Division

330 Leisure and Recreation in Society (3)

Prerequisite: Philosophy 150 or equivalent. Evaluation and interpretation of concepts of leisure; role in individual, community, and national lifestyles; social and economic significance; recreation programs to meet leisure needs of modern society.

331 History and Philosophy of Recreation and Leisure Services (3)

Prerequisite: Recreation 260. History and development of recreation and leisure services in the United States; philosophical bases, current theories and practices.

344 Program Development in Recreation and Leisure Services (3)

Prerequisite: Recreation 280. Analysis of factors in planning and evaluating recreation programs; interrelationship of needs of people; community setting and activity content. Emphasis on program construction and scheduling. Field visits required.

360 Organizational Patterns of Recreation and Leisure Services (3)

Prerequisite: Recreation 260; concurrent enrollment in 331 recommended; Political Science 472 recommended. Organizational patterns and legal aspects of public, private, commercial, and voluntary agencies for organized recreation programs or leisure services at national, regional, state, or local levels. Field visits required.

361 Administration and Supervision of Recreation and Leisure Services (3)

Prerequisites: Recreation 280 and 360; Business 307 or Political Science 460 recommended. Principles, practices, and procedures in administration and supervision of recreation and leisure services; emphasis on program and personnel supervision, budgeting, facility management and maintenance, community relations. Field visits required.

380 Directed Field Work in Recreation (6)

Prerequisites: Completion of upper division core program; minimum g.p.a. of 2.0 overall and in major. Supervised work experience at leadership level in approved

recreation agency. Lecture 1 hour, field work 20 hours minimum; individual conferences required.

398 Cooperative Education (1-6)

Prerequisites: An overall grade point average of 2.35, upper division standing in the departmental major, and approval by the departmental coordinator prior to registration. Active employment, with regular meetings to discuss student's progress. May be repeated to maximum of 6 units. Graded CR/NC only.

412 Recreation and Leisure Services in Urban Setting (3)

Prerequisite: Recreation 361; Sociology 430 recommended. Urban recreation and leisure services; urban residents and environment. Emphasis on cultural, social, and economic implications for program development. Field visits required.

422 Institutional Recreation and Leisure Services (3)

Prerequisites: Recreation 361; 412 recommended. Analysis of clientele, history, characteristics, functions, nature and scope of services provided by various correctional, educational and medical institutions. Field visits required.

423 Public Recreation and Leisure Services (3)

Prerequisites: Recreation 361; Recreation 412, Political Science 403 and 461 recommended. Roles of federal, regional, state and local governmental agencies providing recreation and leisure services. History, characteristics, legal basis, functions and nature of the services provided. Field visits required.

424 Voluntary Recreation and Leisure Services (3)

Prerequisite: Recreation 361; 412 recommended. Roles of various voluntary or private associations, clubs, youth agencies, special interest associations, and employee recreation; emphasis on functional services. Field visits required.

445 Planning and Promotion of Special Events (3)

Prerequisites: Recreation 361, and either 422, 423, or 424; consent of instructor for non-majors. Factors involved in production and promotion of special events that involve large and diverse publics, budgets, specialized facilities and equipment, legal aspects, crowd management. Field visits required.

454 Special Topics in Recreation (1-4)

Prerequisite: Upper division standing. Topics vary; specific prerequisites announced in *Schedule of Classes*. Current issues and interests of students in areas of leisure and recreation. May be repeated to maximum of 9 units as subject matter changes.

461 Community and Public Relations in Recreation (3)

Prerequisites: Recreation 361 and either 422, 423, or 424; Political Science 470 or Sociology 424 recom-

mended. Principles, techniques, methods, and materials utilized to interpret, promote, and publicize organized recreation and leisure activities through various media and personal contacts. Field visits required.

471 Recreation for the Handicapped (3)

Prerequisites: Recreation 361 and Special Education 462. Adaptation of recreation and leisure activities for persons with special needs or limitations; role of community agencies; specialized leadership techniques. Field visits required.

472 Recreation Therapy (3)

Prerequisite: Recreation 471. Philosophy and principles in use of recreation as a modality in rehabilitation of ill or disabled; role of recreation in total rehabilitation process of various agencies. Field visits required.

480 Undergraduate Internship in Recreation (12)

Prerequisites: Completion of core and professional focus requirements and completion of all course work for graduation recommended; minimum g.p.a. of 2.5 in major; above-average rating in Recreation 380 or recommendation of recreation or leisure agency. Directed full-time professional supervisory experience in recreation agency; comprehensive participation in agency's resources and program. Individual development in program planning, conduct and evaluation; budget and finance; legal aspects; community and public relations. Lecture-discussion 1 hour, minimum of 40 hours per week at agency, individual conferences and reports.

491 Special Studies in Recreation (1-4)

Prerequisite: Senior or graduate standing. Specific prerequisites subject to change, depending upon topic of emphasis or content requirements of course. Intensive study of an area of leisure or recreation. Area of study announced in *Schedule of Classes*. May be repeated to maximum of 9 units as subject matter changes.

492 Research and Evaluation in Recreation and Leisure (3)

Prerequisite: Senior standing in Recreation. Measurement and evaluation; interpretation and use of research findings; typical research models applicable to fields of recreation and leisure.

495 Proseminar: Recreation and Leisure Studies (3)

Prerequisite: Senior standing in Recreation. Individual and group analysis and synthesis of problems related to major areas in recreation and leisure.

499 Undergraduate Directed Study (1-3)

Prerequisite: Consent of an instructor to act as sponsor. Project selected in conference with sponsor before registration; progress reports held regularly and final report submitted. May be repeated for credit.

Social Science

In School of Letters and Science

The interdisciplinary programs in Social Science offer a foundation for general and comparative study of societies and human events. The Bachelor of Arts program is described below, and the Master of Arts program is described in the *Graduate Programs* section.

The Faculty

Instruction in Social Science is provided by the faculties of the Departments of Economics, Geography, History, and Political Science. Advisement information is available in the Department of Political Science.

The Undergraduate Program

The Bachelor of Arts degree in Social Science provides the basis for a liberal education with major emphasis in social science. Choices of emphasis are provided through options in Economics, Geography, History, and Political Science. Students must consult advisers from one of the departments before the end of the first quarter of enrollment.

Option in Economics

A total of 90–96 quarter units is required.

Lower Division

Required Courses (38–44 units)

In Economics:

200AB Principles of Economics I, II (4-4)

In Geography:

150 Human Geography (4)

160 Physical Geography (4)

In History:

101ABC Western Civilization (4-4-4)

or

202AB United States Civilization (4-4)

In Political Science:

150 Government and American Society (4)

In Sociology or Anthropology:

Sociology 250 The Individual and Society (4)

or

Anthropology 250 Cultural Anthropology (6)

In Mathematics:

240AB Introductory Mathematical Analysis for Business (4-2)

Upper Division

Required in Economics (8 units):

303 Money, Banking, and the Economy (4)

310 Economics of the Business Firm (4)

Electives (44 units):

(1) Select 16 units from Economics 302–480

(2) Select 4 units from History 423–429

Select 4 units from History 470–489

(3) Select 8 units from Geography 370, 420–431, 441, 442, 475–481

(4) Select 8 units from Political Science 403, 404, 410–425, 427, 430–460

(5) Select 4 units from Sociology 412–484 or Anthropology 401–448

Option in Geography

A total of 86–94 units is required.

Lower Division

Required Courses (34–42 units):

In Geography:

150 Human Geography (4)

160 Physical Geography (4)

210 Map Reading and Interpretation (4)

In History:

101ABC Western Civilization (4-4-4)

or

202AB United States Civilization (4-4)

In Political Science:

150 Government and American Society (4)

In Economics:

200AB Principles of Economics I, II (4-4)

or

301 Economics for Social Sciences (6)

(Upper Division Credit)

In Sociology or Anthropology:

Sociology 250 The Individual and Society (4)

or

Anthropology 250 Cultural Anthropology (6)

Upper Division

Electives (52 units):

(1) Select 8 units from Geography 441, 442, 475, 476, 481

Select 8 units from Geography 370, 420–431

Select 8 additional units from preceding groups or from Geography 301–360, 398, 402–415, 439, 446–471, 477–499

(2) Select 4 units from History 423–429

Select 4 units from History 470–489

Select 4 units from History 490–496

(3) Select 8 units from Political Science 403, 404, 410–425, 427, 430–460

(4) Select 4 units from Economics 302, 303, 310, 390, 406, 433, 471

(5) Select 4 units from Sociology 412–484 or Anthropology 401–448

Option in History

A total of 90–94 units is required.

Lower Division

Required Courses (42–46 units):

In History:

101ABC Western Civilization (4-4-4)

202AB United States Civilization (4-4)

In Geography:

150 Human Geography (4)

160 Physical Geography (4)

In Political Science:

150 Government and American Society (4)

In Economics:

200AB Principles of Economics I, II (4-4)

or

301 Economics for Social Sciences (6)

(Upper division credit)

In Sociology or Anthropology:

Sociology 250 The Individual and Society (4)

or

Anthropology 250 Cultural Anthropology (6)

Upper Division

Electives (48 units):

(1) Select one course from each group of History courses.

Group A

History of Science: 400ABC, 402

Ancient: 410–413

Europe (Chronological): 421–429

Europe (Topical): 431–447

Group B

United States (Chronological): 470–475

United States (Topical): 476–489

Group C

Africa: 414AB–416

Middle East: 419, 420, 491, 492

Asia: 490AB, 494AB, 495AB, 496

Latin America: 461–466

(2) Select additional 12 units in 400-level History courses; 450 and 451 may be included.

(3) Select 8 units from Geography 370, 420–431, 441, 442, 475–481

(4) Select 8 units from Political Science 305–496, except 410, 460–476

(5) Select 4 units from Economics 302–390, 403–412, 420–480

(6) Select one course from following related fields:

Sociology 412–448, 476–486;

Anthropology 401–448, 476–486;

Psychology 304–401, 406–413, 416–426, 431

Option in Political Science

A total of 88–96 units is required.

Lower Division

Required Courses (34–48 units):

In Political Science:

150 Government and American Society (4)

201AB Principles of Political Science I (2-2)

202AB Principles of Political Science II (2-2)

201C Proseminar in Political Science I (2)

or

202C Proseminar in Political Science II (2)

In History:

101ABC Western Civilization (4-4-4)

or

202AB United States Civilization (4-4)

In Geography:

150 Human Geography (4)

160 Physical Geography (4)

In Economics:

200AB Principles of Economics I, II (4-4)

or

301 Economics for Social Sciences (6)

(Upper division credit)

In Sociology or Anthropology:

Sociology 250 The Individual and Society (4)

or

Anthropology 250 Cultural Anthropology (6)

Upper Division

Required Courses (48–54 units):

(1) Select 4 units from Political Science 491–496

(2) Select 4 units each from five of the following six fields: American Government and Politics, Comparative Government, International Relations, Political Theory, Public Administration, and Public Law.

(3) Select 4 units from History 400–469, 490–496

Select 4 units from History 470–489

(4) Select 8 units from Geography 370, 420–431, 441, 442, 475–481

(5) Select 4 units from Economics 302, 303, 310, 390, 406, 471

(6) Select 4 units from Sociology 412–484 or Anthropology 401–488

The Credential Program

Modifications of the Bachelor of Arts degree program in Social Science are being prepared for submission to the Commission for Teacher Preparation and Licensing for the single subject credential in Social Science. Alternative programs for this credential are being submitted by the departments of Anthropology, Chicano Studies, Geography, History, Political Science, Psychology, and Sociology. Programs for waiver status for the single subject credentials in History and Government are also being submitted by the departments of History and Political Science, respectively.

Courses of Instruction

Upper Division Course

499 Undergraduate Directed Study (1-4)

Prerequisites: Consent of an instructor to act as sponsor; ability to assume responsibility for independent work and to prepare written and oral reports. Project selected in conference with sponsor before registration; progress meetings held regularly.

Sociology

In School of Letters and Science

Sociology is the scientific study of human social relations. It provides a background of understanding and research skills for students interested in a variety of occupations, and prepares students for advanced professional study in sociology or social welfare, as well as certain kinds of positions in public and private social service agencies.

Students pursuing legal, educational, and governmental careers may benefit from sociological perspectives on human relations. Students who intend to follow careers in sales, management, marketing, personnel, public relations, advertising, journalism, recreation, home economics, criminal justice, nursing, and comparable areas may find particular value in combining the study of sociology with their professional preparation.

The Bachelor of Arts degree in Sociology with two options, the Bachelor of Arts degree in Social Welfare, and a minor in Sociology are described below. The Master of Arts degree program is described in the *Graduate Programs* section.

The Faculty

Professors: Norman L. Friedman, Don J. Hager, Nathan R. Horwitz, Fred Shanley, Ralph Thomlinson.

Associate Professors: Shirley J. Better, David J. Boubion, Jr., Phillip L. Carter Lawrence Hong, Norbert Rapp, Paul Rowan, Karl M. Wallace, Eui-Young Yu.

Assistant Professors: Francesca Alexander, Bernard Berk, William Darrough, Marion Dearman (Chairperson), Janicemarie Holtz, Terry R. Kandal, Melva Newman, Helen Pitsiou, Jon Snodgrass, Ronald Tsukashima, Patricia G. Wild.

Required Advisement

All students desiring to undertake a major or minor in Sociology must confer with a departmental adviser during their first quarter in the program. During the first quarter of the junior year, students must again meet with an adviser to choose the remainder of their program. Transfer students must see an adviser in their first quarter of enrollment at Cal State L.A.

Sequence Recommendations

To facilitate scheduling, specific prerequisites have been omitted from most courses. It is highly recommended, however, that suggested sequences be observed, since later course work will assume familiarity with prior course material. The following are strongly recommended or required:

- (1) For students not transferring equivalent courses, Sociology 201 and 210AB should be among first courses taken.
- (2) Sociology 390 should be taken soon after Sociology 210AB.
- (3) For Sociology majors, Sociology 412 should be taken before Sociology 414.
- (4) Sociology 410 is required before Sociology 490.

The Undergraduate Program

The Department of Sociology offers a Bachelor of Arts degree in Sociology with a choice of two options: the General Option and the Option for the Single Subject Credential in Social Science. Also offered is the Bachelor of Arts degree in Social Welfare, and a minor in Sociology for students majoring in other fields.

Requirements for the Majors

Both the Bachelor of Arts degrees in Sociology and in Social Welfare consist of a core requirement of 10 units of lower division Sociology courses and 42–70 units of additional required and elective courses depending upon the specific degree program or option selected.

Core Requirements

Required in Sociology (10 units):

- 201 Introductory Sociology (4)
- 210AB Elementary Statistics (3-3)

Bachelor of Arts in Sociology

Option: General Sociology

Required in Sociology (12 units):

- 390 Methods of Social Research (4)
- 412 Development of Sociology (4)
- 414 Contemporary Sociological Theory (4)

Electives in Sociology/Other Fields (30–38 units):

Select courses in consultation with adviser; program may include Sociology 499, but no more than 6 units of credit in this course normally may be counted toward major. With prior approval of adviser, up to 8 units may be selected in other field, to complete a comprehensive sociological program with an interdisciplinary emphasis.

Option: Single Subject Credential in Social Science**Required in Sociology (16 units):**

- 322 Human Socialization (4)
- 390 Methods of Social Research (4)
- 412 Development of Sociology (4)
- 414 Contemporary Sociological Theory (4)

Electives in Sociology (24 units):

Select *one* course from each of following groups:

Group 1: 442, 444, 448, 472

Group 2: 440, 445, 446, 447

Group 3: 415, 476, 478, 480, 482

Group 4: 441, 443, 450, 460, 461

Group 5: 424, 430, 434

Group 6: 421, 422, 426

Electives in Related Fields (20–22 units):

Select *one* course from each of following fields:

Anthropology 433, 435, 439, 460, 461, 462

Economics 301, 350, 390

Geography 150, 160, 415, 422, 446, 453, 467, 477, 478

History 474, 475, 476, 477ABC, 480, 483

Psychology 406, 410AB, 412AB, 418AB, 420, 423, 424A, 424B, 431, 432, 433

Additional Electives (8 units):

Select two courses from Chicano Studies, Pan-African Studies, or Political Science with approval of adviser.

Bachelor of Arts in Social Welfare**Required in Sociology (30 units):**

- 322 Human Socialization (4)
- 370 Field of Social Work (4)
- 390 Methods of Social Research (4)
- 472 Community Organization (4)
- 474 Methods of Social Work (4)
- 495 Directed Field Experience (10)

Electives in Sociology (8 units):

Select *one* from following: 412, 414

Select *one* from following: 461, 476, 478

Additional Electives in Sociology/Other Fields (12 units):

Select courses in consultation with adviser; with prior approval, 4 units of upper division study in another field may be included.

Minor in Sociology

A minor in Sociology provides valuable preparation for students taking a major in Criminal Justice, Business, Journalism, Recreation, and other fields.

A total of 28 units in required and elective courses comprises the minor in Sociology. Students who have an equivalent research methods course in their major may substitute another 4-

unit 400-level Sociology course for the Sociology 390 requirement below. A statistics course normally is prerequisite for Sociology 390.

Lower Division**Required in Sociology (8 units):**

- 201 Introductory Sociology (4)
- 202 Social Problems and Institutions (4)

Upper Division**Required in Sociology (8 units):**

- 390 Methods of Social Research (4)
- 414 Contemporary Sociological Theory (4)

Electives in Sociology (12 units):

Select additional 400-level courses with approval of adviser.

The Credential Program

The Bachelor of Arts degree program in Sociology with the credential option is intended for examination waiver for the single subject credential in Social Science. Students should consult advisers in the department and in the School of Education.

Courses of Instruction**Lower Division Courses****201 Introductory Sociology (4)**

Sociological perspective on human behavior; concepts, processes, and methods of sociological inquiry; personality, groups, cooperation, organization, and conflicts among them; culture, society, stability and change.

202 Social Problems and Institutions (4)

Scientific approach to study of selected social problems, such as racism, crime, poverty, and war; study of major social institutions, including family, religion, and technology.

210AB Elementary Statistics (3-3)

Recommended prerequisite: Basic college mathematics course. Basic social statistics, covering descriptive statistics, tables, charts, summary measures, regression and correlation, and statistical inference, sampling, predictive models, analysis of variance, nonparametric and parametric tests, and simple multivariate analysis. Lecture 2 hours, laboratory 2 hours.

250 The Individual and Society (4)

Sociological approach to broad problems confronting individual in present times; social structure and processes of institutions and societies analyzed for intelligent assessments of social issues and trends. Not accepted for credit toward Sociology major or minor.

Upper Division Courses

Sociology 201 normally is prerequisite for upper division courses in Sociology, and may be waived only with consent of instructor.

322 Human Socialization (4)

Social-psychological approaches to socialization comparing stages of personal growth and development through the life cycle; emphasis on basic issues of social control and change.

370 Field of Social Work (4)

Social welfare: historical development, analysis of structure, policies and issues; emergence of social work profession; contemporary practices and policies of social welfare agencies.

390 Methods of Social Research (4)

Prerequisite: Sociology 210AB or equivalent. Application of scientific method to sociological data; research design, data collection, and elementary analysis procedures; survey and experimental designs, measurement, scale and index construction, and prediction models. With consent of instructor, one unit of Sociology 499 may be taken concurrently.

398 Cooperative Education (1-4)

Prerequisite: Active approved employment under work-study or internship programs. Analysis and reports of student's performance; group study meetings. Credit earned only by students majoring in Sociology. Graded CR/NC only.

410 Advanced Statistics (4)

Prerequisite: Sociology 210AB or equivalent. Specialized treatment of probability and sampling, prediction and correlation, analysis of variance and covariance, experimental design and probability model construction. Recommended for Sociology majors planning graduate study.

412 Development of Sociology (4)

Historical and analytical consideration of contributions of social philosophy, natural sciences, and early social sciences to development and growth of sociology up to French Revolution.

414 Contemporary Sociological Theory (4)

Analysis of sociological theory, nineteenth and twentieth-century contributions; relationship of sociology to the humanities, natural sciences, and other social sciences; status of sociological theory and research; applied sociology trends.

415 Political Sociology (4)

(Also listed as Political Science 415)

Social bases of government and politics, including totalitarianism, social movements and revolutions, conflict and conflict resolution, voting behavior and political socialization.

420 Small Groups (4)

Small group processes in industry, the family, schools, peer and colleague groups; reference-group behavior, relation to larger social systems, group structure and communication, development of research techniques.

421 Social Sources of Human Sexuality (4)

Effects of social environment on emergence, justification, and maintenance of sexual attitudes and behavior; social factors influencing sexual behavior; changing socio-sexual mores and behavioral patterns, and emerging sexual life styles.

422 Social Psychology (4)

Inquiry into social-psychological dimensions of group behavior, emphasizing interactive processes involved in communication, group behavior, perception, attitude formation, motivation, socialization, and involvement of the self-concept. Students may take Psychology 422 as an elective, but not to meet requirements for a major or minor in Sociology.

424 Mass Communications and Public Opinion (4)

Sociology of communications; inquiry into mass culture, propaganda, public opinion, ideologies, public sentiment, and their relationship to social structure; analysis of techniques and forces shaping and altering opinion and values.

425 Medical Sociology (4)

Social system of the hospital, socialization process in the healing professions, social epidemiology of physical and mental disorders.

426 Deviant Behavior (4)

Basic theoretical orientations to social and personal disorganization resulting from role conflict, social conflict, normlessness, or alienation; individual and social deviance related to group processes and structures.

430 Urban Sociology (4)

Urban community and urbanization as contemporary social process; consideration of urban areas, institutions, values, and problems; social and demographic characteristics, urban and suburban change and planning.

434 Population and World Resources (4)

Analysis of major population trends throughout world; birth and death rates, sex ratios, age distributions, race and nationality composition, and occupational patterns; population density, world resources and ecology, underdeveloped countries.

440 Marriage and the Family (4)

The family as a social institution; historical and cross-cultural perspectives, social change as it affects marriage and family life. Analysis of American courtship and marriage patterns, psychodynamics of family life.

441 Sociology of Sex Roles (4)

Institutional analysis of sex-role differences; implications of differential socialization of sexes; access to educational and occupational opportunities; differences in legal status; movements for equality.

442 Social Change (4)

Sources of change in societies; theories of social change, social conflict and the interpretation of social trends; social change and related problems in underdeveloped countries; processes and problems of planned change.

443 Alternative Family Life Styles (4)

Social change in man and woman relationships, including single life styles, non-traditional marriage and family forms, communes and utopian societies; evaluation of benefits and costs to individuals and society.

444 Social Organization and Comparative Institutions (4)

Analysis of social structures, especially in contemporary America; trends in the society, institutions, organizations, and ethnic sub-societies.

445 Sociology of Religion (4)

Social bases of religion, religious institutions, and their modern organizational life; comparative analysis and theories of religious behavior; religious institutions, their representatives, religious conflict and public law.

446 Industry and the Social Order (4)

Social setting of modern industry; theories of organization and decision-making; work and leisure, occupational selection, work satisfactions, job morale and security, collective bargaining, automation and its social consequences.

447 Sociology of Occupations and Professions (4)

Analysis of the social world of work: occupational trends and mobility; occupations, education, and minorities; nature of professions and professional processes and structures; study of selected occupations and professions.

448 Social Stratification (4)

Examination of sociological theory and research bearing on social stratification; social differentiation; class position, class interests, correlates of social class; trends in occupational mobility, comparison of stratification systems.

450 Sociology of Aging (4)

Aging as a social process; emphasis on sociological theories of aging and social problems of the aged; work, retirement, family relationships, housing, income maintenance; societal response to aged.

454 Selected Topics in Sociology (1-6)

Current topics of special interest to Sociology students. Content varies; see *Schedule of Classes* for specific topics. May be repeated for credit.

460 Race and Social Conflict (4)

Racial, ethnic, and religious minorities, race and racism; strategies: accommodation, education, protest, litigation-legislation, civil rights, non-violence, confrontation, Black Power; minority leadership; theories of social conflict and the democratic society.

461 Social Welfare in Minority Communities (4)

Prerequisite: Sociology 370. Social work practice and its relationship to minority group communities; innovative methods of delivery of services; casework approaches, racism, role of social worker.

472 Community Organization (4)

Examination of welfare system with emphasis on agency and community behavior and social work methods of improving system.

474 Methods of Social Work (4)

Prerequisite: Sociology 370 or graduate standing, or consent of instructor. Theories, concepts, and values used by social workers serving individuals, families, and groups in public assistance, correctional, child welfare, psychiatric, family service, medical, youth service, and other agencies.

475 Social Work with Groups (4)

Prerequisite: Sociology 370. Historical development, empirical and theoretical knowledge underlying content and methods of group social work; role of group social worker in managing stages of group development; use of groups for treatment, prevention, social action; staff and volunteer training in correctional, community, and mental health agencies.

476 Child Welfare (4)

Historical and contemporary aspects of problems affecting children and welfare services assigned to deal with these problems.

478 Social Legislation (4)

Social, legal, and legislative processes establishing and maintaining the general welfare; social values and social legislation; family, child, and labor legislation; public assistance and social security; future directions.

480 Criminology (4)

Criminal law, crime, and deviance. Social and psychological factors in criminal behavior, criminal law and criminal justice, prevention and control, trends in theory and correctional procedures.

482 Juvenile Delinquency (4)

Extent and distribution of delinquency, with emphasis on the local area; meaning, implications, and treatment of delinquent behavior; personal and environmental conditioning factors, delinquency and the rights of children.

484 Corrections (4)

Survey of procedures used in processing the offender; from arrest, through trial, to prison and probation; contemporary theories of criminality and rehabilitation applied to the social evaluation of these procedures.

486 Probation and Parole (4)

Prerequisite: Sociology 480 or 482. History, philosophy, legal basis, and procedures governing investigation, treatment and supervision of adjudged juvenile offenders and adult violators placed on probation and parole.

490 Advanced Research Methods (4)

Prerequisites: Sociology 390 and 410. Advanced research techniques in sociology, including design of experiments, sample surveys and panel studies, scaling,

multivariate and machine data analysis procedures. Individual projects; laboratory. With consent of instructor, one unit of Sociology 499 may be taken concurrently.

495 Directed Field Experience (5)

Prerequisites: Sociology 474 (may be taken concurrently), consent of instructor, and agency acceptance. Student placement to provide experience under supervision in a social agency; group sessions and individual evaluative conferences. Unit credit only for students majoring in sociology. May be repeated to maximum of 10 units.

496 Field Work (4)

Prerequisites: Sociology 474 (may be taken concurrently), consent of instructor, and agency acceptance. Student placement, providing experience under supervision in a social agency; group sessions and individual evaluative conferences. Unit credit only for students major-

ing in Sociology. May be taken 3 times for credit. Graded CR/NC only.

497 Sociology Proseminar (4)

Prerequisite: Sixteen upper division units in Sociology or consent of instructor. A comprehensive survey and analysis of selected areas of sociological and social welfare inquiry. Recommended for departmental majors planning or beginning graduate study. May be repeated once for credit. With consent of instructor, one unit of Sociology 499 may be taken concurrently.

499 Undergraduate Directed Study (1-4)

Prerequisites: Senior standing, overall grade point average of 2.75, consent of a faculty sponsor, and his approval of proposed project prior to registration. The student must have ability to assume responsibility for independent research and analysis. Regular discussion of progress with faculty sponsor is expected before presentation of final written report.

Speech Communication and Drama

In School of Letters and Science

The Department of Speech Communication and Drama offers undergraduate programs leading to Bachelor of Arts degrees in Drama, Radio and Television Broadcasting, Speech Communication, and Speech Pathology and minors in Drama and in Speech Communication. Graduate programs leading to Master of Arts degrees in Drama, Speech Communication, and Speech Pathology and Audiology are described in the *Graduate Programs* section.

The Faculty

Professors: Walter S. Beaver, Jack B. Cullen, Robert Douglass, Louis G. Gardemal, Lawrence P. Goodman, Elise S. Hahn, Anthony Hillbruner, Howard P. Holladay, Robert D. Kully, Barry McGee, Marcella Oberle, Marjorie M. Smith, James J. Stansell.

Associate Professors: Roger M. Altenberg, Beverly L. Hendricks (Chairperson), W. Keith Henning, Hastell F. Hollis, Lorraine Monnin, Michael T. Motley, Maris U. Ubans.

Assistant Professors: Anthony A. Adams, Richard Hoskins, Michael P. Kelley, James L. Nicholson, Sandra Purnell, Pamela D. Woody.

Bachelor of Arts Degree in Drama

The degree in Drama is designed for students who elect to major in Drama as part of a liberal arts program, or those who plan to engage in professional work on the stage, screen, or television, or in careers in which skill in dramatic arts is essential. It is departmental policy that all undergraduate students majoring in Drama will make themselves available for participation in scheduled productions of the department.

Requirements for the Major

A total of 70–74 units is required. All students take a common core. In addition, each student selects one of the following three options: Acting-Directing, Theatre History and Literature, or Technical Theatre.

Core Requirements

The 42 units of lower and upper division courses required for the common core are as follows:

Lower Division

Required in Drama (23 units):

- 131 Stagecraft I (3)
- 132 Stagecraft II (3)
- 141 Acting Fundamentals: Games and Exercises (3)
- 142 Acting Fundamentals: Character Study (3)
- 143 Acting Fundamentals: Scene Study (3)
- 149 Diction and Dialects for Performer (4)
- 152 Analysis of Drama (4)

Upper Division

Required in Drama (20 units):

- 300 Advanced Play Production (4)
- 311 Development of World Theatre I (4)
- 312 Development of World Theatre II (4)

313 Development of American Theatre (4)

445 Principles of Directing I (4)

Options

Select one of following options, with approval of adviser.

Option A: Acting-Directing

Required in Drama (16 units):

- 322 Theatrical Makeup (3)
- 341 Advanced Acting: Improvisation (3)
- 342 Advanced Acting: Characterization (3)
- 343 Advanced Acting: Playing a Role (3)
- 446 Principles of Directing II (4)

Electives in Drama (11 units):

Select *two* from following:

- 439 Theatre Management (4)
- 460 Studies in Selected Dramatists (4)
- 461 The Nature of Dramatic Comedy (4)
- 462 Nature of Dramatic Tragedy (4)
- 463 Shakespeare as Living Theatre (4)
- 470 Selected Studies in Theatre Arts (4)
- 471 Theatre of the Avant-Garde (4)
- 472 History and Analysis of Lyric Theatre (4)
- 476 Playwriting (4)

Select *one* from following:

- 426 Stage Costume Design I (3)
- 431 Stage Scenery Design I (3)
- 434 Stage Lighting Design I (3)

Option B: Theatre History and Literature

Required in Drama (20 units):

- 460 Studies in Selected Dramatists (4)
- 461 The Nature of Dramatic Comedy (4)
- 462 Nature of Dramatic Tragedy (4)
- 463 Shakespeare as Living Theatre (4)
- 471 Theatre of the Avant-Garde (4)

Electives in Drama (6–7 units):

Select *one* from following:

- 341 Advanced Acting: Improvisation (3)
- 439 Theatre Management (4)
- 470 Selected Studies in Theatre Arts (4)
- 472 History and Analysis of Lyric Theatre (4)
- 476 Playwriting (4)

Select *one* from following

- 322 Theatrical Makeup (3)
- 426 Stage Costume Design I (3)
- 431 Stage Scenery Design I (3)
- 434 Stage Lighting Design I (3)

Elective in English (4 units):

Select *one* from following:

- 417 Shakespeare (4)
- 424 Greek and Roman Drama in Translation (4)
- 427 Modern Drama: Continental, English, and American (4)
- 428 Contemporary Drama: Continental, English, and American (4)

Option C: Technical Theatre

Required in Drama (16 units):

- 322 Theatrical Makeup (3)
- 426 Stage Costume Design I (3)
- 431 Stage Scenery Design I (3)
- 434 Stage Lighting Design I (3)
- 439 Theatre Management (4)

Electives in Drama (10–11 units):

Select *one* from following:

- 460 Studies in Selected Dramatists (4)
- 461 The Nature of Dramatic Comedy (4)
- 463 Shakespeare as Living Theatre (4)
- 471 Theatre of the Avant-Garde (4)
- 472 History and Analysis of Lyric Theatre (4)

Select *two* from following:

- 323 Advanced Theatrical Makeup (3)
- 427 Stage Costume Design II (3)
- 432 Stage Scenery Design II (3)
- 435 Stage Lighting Design II (3)
- 470 Selected Studies in Theatre Arts (4)

Bachelor of Arts Degree in Radio and Television Broadcasting

The Bachelor of Arts degree with a major in Radio and Television Broadcasting emphasizes the non-entertainment aspects of radio and television. Educational, instructional and informational broadcasting are stressed. Among the curriculum objectives are the training of personnel for program production and planning in the elementary and secondary schools, colleges and universities, as well as supervisory and administrative personnel on all levels of educational and instructional television.

One function of the courses offered is preparation for teaching on television. Another is to assist in the preparation of directors and producers of cultural programs, such as a single performance of serious drama, Shakespearean series, or illustrated lectures on the arts, insofar as these involve special broadcasting problems or potentialities. A third function is to prepare graduates

for news, public affairs, and educational broadcasting.

Requirements for the Major

All majors in Radio and Television Broadcasting are required to complete the core program, totaling 50–52 units. In addition, they select one of three options: Cultural Backgrounds for Broadcasting, Informational Broadcasting, or Educational and Instructional Broadcasting. Each option requires an additional 28–32 units, but students are given a variety of courses from which to select, with approval of an adviser.

Core Requirements

The core program of 50–52 units in Broadcasting, Journalism, and related fields is as follows:

Lower Division

Required Core Courses (20 units):

In Broadcasting:

- 200 Survey of Broadcasting (4)
- 201 Introduction to Broadcast Production (4)

In Foreign Languages:

Select 12 units in 100- or 200-level courses in one foreign language.

Upper Division

Required Core Courses (30–32 units):

In Broadcasting:

- 301 Advanced Broadcast Production (4)
- 360 Broadcast Program Planning and Development (4)
- 415 Broadcasting Law and Regulation (4)
- 460 Social Role and Responsibility of Broadcasting (4)
- 499 Undergraduate Directed Study (2-4)

In Journalism:

- 400 History and Philosophy of Mass Media (4)

In Related Fields:

Select *two* from following, including either or both courses in English and Speech Communication.

In English:

- 406 Advanced Writing (4)

In Speech Communication:

- 371 Persuasive Communication (4)

In Drama:

- 445 Principles of Directing I (4)

In Broadcasting:

- 410 Radio and Television Writing (4)

Options

Students select *one* of the three option programs for 28–32 units to complete requirements for the major.

Option: Cultural Backgrounds for Broadcasting

Electives (12 units):

Select from following, with both academic departments represented and with limit of one lower division course.

In Speech Communication:

- 267 Introduction to Oral Interpretation (4)

In Drama:

- 311 Development of World Theatre I (4)
 312 Development of World Theatre II (4)
 313 Development of American Theatre (4)
 461 Nature of Dramatic Comedy (4)
 462 Nature of Dramatic Tragedy (4)
 476 Playwriting (4)

In English:

- 250 Understanding Literature (4)
 417 Shakespeare I (4)
 424 Greek and Roman Drama in Translation (4)
 427 Modern Drama: Continental, English, and American (4)
 428 Contemporary Drama: Continental, English, and American (4)

Additional Electives (16 units):

Select from following, with at least three academic fields represented.

In American Studies:

- 401, 402, 403, 404

In Art:

- 406, 411, 416, 426

In English:

- 221, 223, 480, 481

In Music:

- 351, 470

In Philosophy:

- 474, 475

In Speech Communication:

- 454, 473A, 473B

Option: Informational Broadcasting*Required in Journalism (12 units):*

- 201 News Writing (4)
 492 Radio and Television News Writing (4)
 493 Editorial and Interpretive Writing (4)

or

- 494 Reporting of Public Affairs (4)

Electives (16 units):

(1) Select two from following:

In American Studies:

- 402 Ideas in America (4)
 403 American Popular Culture (4)

In English:

- 471 American Authors: Edwards to Emerson (4)
 472 American Authors: Melville to Whitman (4)
 473 American Authors: Dickinson to James (4)
 475 American Novel Since 1920 (4)

In Speech Communication:

- 472 Studies in Literature of International Public Discourse (4)
 473A Studies in Literature of American Public Discourse to 1860 (4)
 473B Studies in Literature of American Public Discourse 1860 to Present (4)

Select two from following:

In Economics:

- 301 Economics for Social Sciences (6)

In Political Science:

- 403 State and Local Government (4)
 404 Urban Government and Politics (4)
 414 Interest Groups (4)

In Sociology:

- 414 Contemporary Sociological Theory (4)
 422 Social Psychology (4)
 424 Mass Communications and Public Opinion (4)

In Speech Communication:

- 485 Rhetorical Criticism (4)

In Psychology:

- 420 Psychology of Communications (4)

Option: Educational and Instructional Broadcasting*Required in Broadcasting (4 units):*

- 401 Educational and Informational Broadcasting (4)

Elective (4 units):

Select one from following:

In Broadcasting:

- 402 Practicum in Educational Broadcasting (4)

In Educational Foundations:

- 414 Sociological Foundations of Education (3)

Additional Electives (20 units):

Select from following, with at least two academic areas represented; prior approval of adviser required.

In Drama:

- 476 Playwriting (4)

In English:

- 250 Understanding Literature (4)

In Psychology:

- 420 Psychology of Communications (4)
 422 Social Psychology (4)

In Sociology:

- 424 Mass Communications and Public Opinion (4)
 460 Race and Social Conflict (4)

In Speech Communication:

- 176 Argumentation (4)
 278 Group Discussion (4)
 478 Group Communication: Dynamics of Leadership and Participation (4)
 485 Speech Analysis and Evaluation (4)

Elective Substitutions:

Up to 8 units from following may be substituted for above.

In English:

- 417, 424, 480, 481

In Drama:

- 311, 312, 313, 461, 462

Bachelor of Arts Degree in Speech Communication

The Speech Communication program is available in two options: The General Option and the Option for the Single Subject Credential in English. The latter option is intended for students interested in pursuing a career in teaching. Both op-

tions are designed to provide students with an understanding of the nature and functions of human symbolic communication. The scope of the program includes: (1) Theories of communication in terms of historical, philosophical, critical, cultural, and scientific constructs; (2) dimensions of public discourse, interpersonal, small-group, and intercultural communication, persuasion and social influence, language and symbolic processes, the esthetic dimensions of speech, and instructional development; (3) methodologies necessary for communication research (historical, critical, and empirical).

The degree will add to the student's perception and skill in dealing with people, and is structured to provide a foundation for careers in business, law, government service, health, the ministry, teaching, public relations, media communication, and other professions in which an understanding and utilization of the process of communication is essential.

Requirements for the Major

The General Option requires a total of 64 units, of which 12–20 are in lower division and 48–52 are in upper division courses. The Option for the Single Subject Credential in English requires a total of 78 units, of which 8–16 are in lower division and 62–70 are in upper division courses. In addition, the credential option requires 16 units of General Education courses.

General Option

Lower Division

Required in Speech Communication (8 units):

- 150 Oral Communication (4)
- 176 Argumentation (4)

Electives in Speech Communication (4 units):

- 267 Introduction to Oral Interpretation (4)
- 268 Reader's Theatre: Practicum and Performance (2)
- 277 Forensics (2)
- 278 Problem Solving Through Group Discussion (4)

Additional Electives (0–8 units):

Select from lower division courses in Speech Communication with approval of adviser.

Upper Division

Required in Speech Communication (20 units):

- 367 Oral Interpretation of Prose and Poetry (4)
- or
- 467 Studies in Esthetic Bases of Speech (4)
- 371 Persuasive Communication (4)
- 389 Introduction to Communication Theory (4)
- 485 Rhetorical Criticism (4)
- 487 Proseminar: Experimental Research in Speech (4)

Electives in Speech Communication (12 units):

Select one from each of following areas:

A. Language

- 388 Symbolic Processes in Language (4)

- 456 Development in Verbal Behavior in Early Childhood (4)
- 461 Descriptive Phonetics (4)
- 463 Psychology of Speech (4)
- 488 Psycholinguistic Aspects of Speech Communication (4)
- 494 Speech Communication Behavior in Early Childhood (4)

B. Rhetorical Theory

- 480 Rhetorical Theory: Greek and Roman (4)
- 481 Rhetorical Theory: Renaissance and Modern (4)
- 482 Rhetorical Theory: Contemporary Developments (4)

C. History and Criticism of Public Address

- 454 Selected Studies in Speech Communication (2–4)
- 472 Studies in Literature of International Public Discourse (4)
- 473A Studies in Literature of American Public Discourse to 1860 (4)
- 473B Studies in Literature of American Public Discourse 1860 to Present (4)

Additional Electives (16–20 units):

Select from upper division courses in Speech Communication or related fields, with approval of adviser.

Option for Single Subject Credential in English

Required General Education Courses (16 units):

The following courses are prerequisite to Credential Option and earn General Education credit:

- English 150A or 150B
- English 250
- English 251 or Pan African Studies 422
- Speech Communication 150

Lower Division

Required in Speech Communication (8 units):

- 176 Argumentation (4)
- 267 Introduction to Oral Interpretation (4)

Electives in Speech Communication (0–8 units):

Select from following, or from upper division electives below, with approval of adviser:

- 268 Reader's Theatre: Performance and Practicum (2–2)
- 277 Forensics (2–2)
- 278 Problem Solving Through Group Discussion (4)

Upper Division

Required in Speech Communication (22 units):

- 367 Oral Interpretation of Prose and Poetry (4)
- 377 Forensics (2–2)
- 461 Descriptive Phonetics (4)
- 485 Rhetorical Criticism (4)
- 489 Intercultural Communication (4)
- 491 Instructional Theories in Speech Communication (4)

Required in English (16 units):

- 308 Art of Writing (4)
- 401 English Language in America (4)
- 405 Modern English Grammar (4)
- 410 Writing in the Schools (4)

Electives in Speech Communication (12 units):

Select one from following:

388, 463, 488, 494

Select one from following:

480, 481, 482

Select one from following:

472, 473A, 473B

Electives in English (12 units):

Select three from following:

416, 417, 418, 419, 424, 446, 447, 460, 461, 463,
464, 465, 467, 468, 471, 472, 473, 475, 480, 481,
482, 484, 485, 486

Additional Electives (0-8 units):

Select from following as needed to complete program total:

American Studies 403

Drama 480

English 451

Speech Communication 350, 371, 389, 467, 472,

473A, 473B, 490

Bachelor of Arts Degree in Speech Pathology

The degree in Speech Pathology is designed as a pre-professional curriculum for students who plan to: (a) prepare for service as a public school speech and hearing specialist under whatever certification program is developed by the state, or (b) pursue the Master of Arts degree or its equivalent with the intention of securing the A.S.H.A. Certificate of Clinical Competence and state licensure as a Speech Pathologist. Candidates for the degree must meet personal and professional standards established by the department.

Requirements for the Major

A total of 63-65 units is required in Speech Pathology, Audiology, and related behavioral science courses.

Lower Division

Required in Speech Pathology (3 units):

160 Voice and Diction (3)

Upper Division

Required in Speech Pathology (35 units):

434 Speech Disorders (4)

435 Advanced Problems in Psychological Speech Disorders (3)

445X Observations in Speech Pathology (1)

436 Advanced Problems in Neuropathologies of Speech and Language (3)

445Y Observation in Speech Pathology (1)

437 Advanced Problems in Voice and Articulation Disorders (3)

445Z Observation in Speech Pathology (1)

446 Diagnostic Procedures in Speech Disorders (3)

448 Clinical Practice in Speech Disorders (2)

456 Development of Verbal Behavior in Early Childhood (4)

461 Descriptive Phonetics (4)

462AB Speech Science (2-2)

Required in Audiology (19 units):

400AB Hearing Science (2-2)

402 Principles of Audiology (4)

403 Hearing for Speech (3)

405 Speech and Language Development and/or Remediation—Hard of Hearing Child (3)

420 Speechreading (3)

429 Clinical Practice in Aural Rehabilitation (1)

Required in Related Fields (8 units):

In Psychology:

412AB Psychology of Human Development (4-4)
or

In Educational Guidance and Counseling:

405AB Theoretical and Development Aspects of Behavior (4-4)

The Minor Programs

Minors are offered in Drama and in Speech Communication for students majoring in other fields.

Minor in Drama

This program is suggested for students in allied arts, music, dance, and recreation, and students whose career objectives include interpersonal relationships in a humanistic context. A total of 32 units is required.

Lower Division

Required in Drama (13 units):

131 Stagecraft I (3)

132 Stagecraft II (3)

141 Acting Fundamentals: Games and Exercises (3)

152 Analysis of Drama (4)

Upper Division

Required in Drama (12 units):

311 Development of World Theatre I (4)

312 Development of World Theatre II (4)

313 Development of American Theatre (4)

Electives in Drama (7 units):

Select one from following:

445, 460, 461, 462, 470, 472

Select one from following:

322, 426, 431, 434

Minor in Speech Communication

The Speech Communication minor is designed for students interested in expanding their knowledge of the communication process, especially as it relates to their professional careers or related fields in the liberal arts. The Speech Communication curriculum provides a variety of courses for students preparing for careers in community development, social services, health, safety, and recreation services, business and industry, criminal justice, law, education, industrial studies, mass media, and many others where an understanding of the process and practice of speech communication is vital. A total of 32 units in Speech Communication is required.

Required in Speech Communication (8 units):

150 Oral Communication (4)

176 Argumentation (4)

Electives (24 units):

Select a program, in consultation with a departmental adviser, to meet the goals for which the minor is chosen. A minimum of 16 units must be taken in upper division courses.

The Credential Program

The Bachelor of Arts degree in Speech Communication with the Credential Option is intended for examination waiver for the single subject credential in English. A waiver program for the Bachelor of Arts degree in Drama is currently under preparation. Students should consult advisers in the department and in the School of Education.

Courses in Drama

Lower Division Courses

100 Play Production (1)

Active participation in University-sponsored dramatic activities. Assignments may include acting, directorial assistance, lighting, scenery, costuming, props, house management. May be repeated to maximum of 4 units.

131 Stagecraft I (3)

Technical theatre practices developed in lectures, demonstrations, and workshop experience; stage management and production organization; basic scenery construction and painting. Laboratory hours required.

132 Stagecraft II (3)

Technical theatre practices developed in lectures, demonstrations, and workshop experience; stage properties, basic stage lighting and sound effects. Laboratory hours required.

141 Acting Fundamentals: Games and Exercises (3)

Basic principles and techniques of acting. Exploration of creative processes through theatre games and improvisational exercises. Additional hours required.

142 Acting Fundamentals: Character Study (3)

Basic principles and techniques of acting. Building a character through textual analysis and practical work based on text. Additional hours required.

143 Acting Fundamentals: Scene Study (3)

Basic principles and techniques of acting. Analysis of scene structure, use of sub-text, actions, and objectives. Performance of selected scenes. Additional hours required.

149 Diction and Dialects for Performer (4)

Phonation, articulation, and pronunciation; special attention to standard stage speech and commonly used dialects for actors and other performers in all mediums.

152 Analysis of Drama (4)

Introduction to principles of dramatic art; consideration of elements of drama, dramatic structure, types and styles; evaluation and appreciation through study and workshop presentation of representative plays.

Upper Division Courses

300 Advanced Play Production (4)

Prerequisite: Consent of instructor. Participation under faculty supervision in planning, preparation, and presentation of University-sponsored dramatic presentations; emphasis on acting and assistant director assignments. Laboratory hours required. May be repeated to maximum of 16 units.

301 Creative Dramatics (4)

Philosophies and techniques of creative dramatics. Emphasis on improvisation, playmaking, pantomime, ongoing drama, story dramatization, role playing; selected projects and demonstrations.

306 Children's Theatre (4)

Philosophies, attitudes, and forces shaping current practices in children's theatre; study of selected scripts and production techniques; participation in a University production.

311 Development of World Theatre I (4)

Significant developments in world dramatic literature and theatre; emphasis on classical Greece, ancient Rome, medieval world. Italian Renaissance, Spain's Golden Age, Elizabethan England.

312 Development of World Theatre II (4)

Significant developments in world dramatic literature and theatre; emphasis on French Neo-classicism, Restoration, and 18th century England, romantic movement, rise of Realism and Naturalism, beginnings of modern drama on the continent, and early revolts against Realism.

313 Development of American Theatre (4)

Significant developments in American dramatic literature and theatre from colonial period to modern.

322 Theatrical Makeup (3)

Prerequisite: Consent of instructor. Basic concepts and skills in makeup for stage, television and cinema; straight and corrective makeup; old age and character modeling; introduction to facial prosthetics; basic techniques in building facial hair pieces. Laboratory hours required.

323 Advanced Theatrical Makeup (3)

Prerequisite: Drama 322 or consent of instructor. Advanced techniques in creation and application of latex, polyurethane, and wax dental prosthetics for stage, film, and television; ventilation processes for beard and wig construction; experimental design of stylized non-realistic makeup. Laboratory hours required.

341 Advanced Acting: Improvisations (3)

Prerequisites: Drama 141, 142 and 143, or equivalents. Advanced principles and techniques of acting. Selected improvisations to increase creativity and solve textual problems. Includes interview, fiction, preface, etude and study. Additional hours required.

342 Advanced Acting: Characterization (3)

Prerequisites: Drama 141, 142 and 143, or equivalents. Advanced principles and techniques of acting. Creation of characters through analysis of text and selected exercises, including inner monologue, sensory symbol and the visual film. Additional hours required.

343 Advanced Acting: Playing a Role (3)

Prerequisites: Drama 141, 142 and 143, or equivalents. Advanced principles and techniques of acting. Analysis and exercises to work on a role as a whole. Includes main line of action, spine, core, and scoring the role. Additional hours required.

398 Cooperative Education (1-2)

Prerequisites: Overall grade point average of 2.35, upper division standing in departmental major or minor, and approval by departmental coordinator prior to registration. Active employment with regular meetings to discuss student's progress. May be repeated to maximum of 6 units. Graded CR/NC only.

426 Stage Costume Design I (3)

Prerequisite: Two courses in dramatic literature. Basic principles of costume design and construction; historical survey of costumes from ancient to modern times as related to stage costume rendering. Practical experience through participation in University-sponsored productions. Laboratory hours required.

427 Stage Costume Design II (3)

Prerequisite: Drama 426 or consent of instructor. Theory and application of costume design and construction for stage; research methods, principles of design, dramatic analysis, rendering layout, and construction techniques. Practical experience through participation in University-sponsored productions. Laboratory hours required.

431 Stage Scenery Design I (3)

Prerequisites: Drama 131 and 132 or equivalent, or consent of instructor. Theory and practice of scenery design; demands of physical stage, script, and director. Working drawings, models and sketches; perspective rendering. Practical experience through participation in University-sponsored productions. Laboratory hours required.

432 Stage Scenery Design II (3)

Prerequisite: Drama 431 or equivalent, or consent of instructor. Advanced problems in design, projects in design of drama, comedy, and musical comedy or opera. Practical experience through participation in University-sponsored productions. Laboratory hours required.

434 Stage Lighting Design I (3)

Prerequisites: Drama 131 and 132 or equivalent, or consent of instructor. Theory and practice of lighting design; functions and properties of light on stage; basic electricity, optics, color. Light plots and plans, lighting equipment and its use, control systems. Practical experience through participation in University-sponsored productions. Laboratory hours required.

435 Stage Lighting Design II (3)

Prerequisite: Drama 434 or equivalent, or consent of instructor. Advanced problems in lighting design; projects in conception and execution of designs for drama, comedy, and musical comedy or opera. Practical experience through participation in University-sponsored productions. Laboratory hours required.

439 Theatre Management (4)

Prerequisites: Drama 131, 132, and 152, or consent of instructor. Principles of organization, operation, and administration of educational, community, and professional theatre; practical experience in theatre management under faculty supervision through assignment in University-sponsored productions.

445 Principles of Directing I (4)

Prerequisites: Drama 141, 142, and 143, or equivalent. Basic concepts of stage directing: script analysis, blocking, casting, rehearsal procedures, presentation of scenes from realistic plays. Additional hours required.

446 Principles of Directing II (4)

Prerequisite: Drama 445 or equivalent. Advanced techniques of stage directing: development of style, problems of directing pre-modern and non-realistic plays, working with actors. Presentation of scenes. Additional hours required.

460 Studies in Selected Dramatists (1-4)

Prerequisite: Two courses in dramatic literature or consent of instructor. Intensive study of one or several important dramatists. Specific course content will vary from quarter to quarter. May be repeated as subject matter changes to maximum of 8 units.

461 Nature of Dramatic Comedy (4)

Prerequisite: Drama 152 or a course in dramatic literature, or equivalents. Theory and techniques of comedy in literature and entertainment arts; emphasis on kinds of comedy in historical perspective.

462 Nature of Dramatic Tragedy (4)

Prerequisite: Drama 152 or consent of instructor. Stage tragedy from ancient Greece to present; major theories and kinds of tragedy, and evolution of tragic hero and heroine.

463 Shakespeare as Living Theatre (4)

Prerequisites: Drama 152 or English 222; English 417, or equivalents. History and theories involved in bringing Shakespeare's drama to life on stage. Analysis of major plays in relation to their potential production in contemporary theatre.

470 Selected Studies in Theatre Arts (1-4)

Prerequisites: Drama 311 and 312 or consent of instructor. Intensive study of one or more arts of theatre selected from problems, contributors or historical trends. Specific course content and unit value varies from quarter to quarter. May be repeated as subject matter changes.

471 Theatre of the Avant-Garde (4)

Prerequisite: Drama 152 or English 222 or equivalent. Translation studies in development of avant-garde in French-, German-, English-speaking theatres. Emphasis on experimental drama as producible, living theatre.

472 History and Analysis of Lyric Theatre (4)

Study and evaluation of lyric theatre from its origin to present; emphasis on development of form and style, analysis of representative works, emergence of American lyric theatre.

476 Playwriting (4)

Prerequisite: At least one upper division course in dramatic literature and consent of instructor. Workshop in planning, preparation and writing of manuscripts for the stage; emphasis on handling dramatic materials, play structure, characterization, and appropriate dialogue. May be repeated once for credit.

480 Cinema as a Dramatic Art (4)

Comparative analysis of dramatic media, consideration of media as art forms; emphasis on "great films" series. May be repeated once with consent of instructor.

485 Children's Film (4)

Prerequisite: Psychology 412A or Home Economics 220 recommended. Instructional and esthetic elements in films for pre-school to adolescent children; film techniques, audience analysis, and development of a rationale for designating films appropriate for various age levels.

490 Special Problems in Educational Theatre (4)

Prerequisite: Drama 131, 132, or 152, or consent of instructor. Philosophy, theory, and history of educational theatre; problems in play selection, casting, and rehearsal procedures, production styles; special emphasis on current trends.

Courses in Broadcasting

Lower Division Courses

200 Survey of Broadcasting (4)

Survey of principles and practices in American broadcasting with emphasis on techniques of radio and television programming through lectures, reports, and selected viewing.

201 Introduction to Broadcast Production (4)

Introduction to radio and television production facilities and techniques. Principles of directing, picture composition, camera movement, lighting, basic sound patterns, and control room operation. Lecture 3 hours, laboratory 2 hours.

Upper Division Courses

301 Advanced Broadcast Production (4)

Prerequisite: Broadcasting 201 or consent of instructor. Advanced study of directing principles and production techniques as applied to educational, informational and cultural program production. Lecture 3 hours, laboratory 2 hours.

360 Broadcast Program Planning and Development (4)

Prerequisite: Broadcasting 201 or consent of instructor. Elements and problems in developing educational, informational and cultural broadcast programs. Preparation of programs for production; research techniques, development of program content and format, visualization of ideas; types of programs.

401 Informational and Educational Broadcasting (4)

Development, potentials, and limitations of instructional television, analysis of educational, instructional, and informational programming.

402 Practicum in Educational Broadcasting (4)

Prerequisite: Broadcasting 401 or consent of instructor. Identification of problems in television teaching and utilization, experience in demonstration teaching, production and direction.

410 Radio and Television Writing (4)

Content and techniques of radio and television writing, preparation of various broadcast scripts, unique characteristics of media as foundations for script writing.

415 Broadcasting Law and Regulation (4)

Study of governmental regulatory agencies and agencies of self-regulation affecting broadcasting, with special attention to educational, informational, and cultural broadcasting.

460 Social Role and Responsibility of Broadcasting (4)

Standards and responsibilities of broadcasters to operate "in the public interest." Effects of programs on learning, children, taste, public opinion; role of various groups, including networks, educators, critics and advertisers.

499 Undergraduate Directed Study (2-4)

Prerequisite: Consent of adviser and consent of an instructor to act as sponsor. Individual projects designed to reflect ability of student and to be a contribution to field of educational, informational or cultural broadcasting.

Courses in Speech Communication

Lower Division Courses

150 Oral Communication (4)

Introduction to problems of effective oral communication through study and experience in analysis, synthesis, and presentation of subject matter in oral discourse.

160 Voice and Diction (3)*(Also listed as Speech Pathology 160)*

Essentials of formal speech with training in voice production, articulation, pronunciation, projection, and related oral skills.

176 Argumentation (4)

Principles of argumentation: reasoned discourse, methods of logical analysis and reflective thinking, practical application through adaptation of materials to audience situations, argumentative speech, kinds and forms of debate on current issues.

267 Introduction to Oral Interpretation (4)

Development of basic skills in reading aloud, analysis of selections and practice in oral reading; special emphasis on platform behavior, evaluation of material and mechanics of interpretation.

268 Reader's Theatre: Practicum and Performance (2)

Lecture-workshop in reader's theatre, story theatre, and chamber theatre production; emphasis on group presentation of poetry, fiction, and ethnic programs. May be repeated to maximum of 8 units.

277 Forensics (2)

Workshop in intercollegiate forensic activities. May be repeated to maximum of 8 units.

278 Problem Solving Through Group Discussion (4)

Principles of decision-making and interaction in group communication situations, development of discussion, participation, and leadership skills for business, school and community.

Upper Division Courses**330 Organizational and Professional Communications (4)**

Prerequisite: Speech Communication 150 or consent of instructor. Introduction to organizational communication concepts and techniques, including dyadic communication, group communication, interviewing, reporting, and multimedia presentations.

350 Interpersonal Communication (4)

Prerequisite: Speech Communication 150 or consent of instructor. Introductory study of interpersonal communication; verbal and non-verbal communication in face-to-face interaction; how individuals assume roles as message senders, receivers; interpersonal perception and adaptation; barriers to interpersonal communication.

367 Oral Interpretation of Prose and Poetry (4)

Prerequisite: Speech Communication 267 or consent of instructor. Theory of oral interpretation. Emphasizes content, structure, style as determinants of the oral presentation of poetry and prose.

370 Public Speaking: Theory and Practice (4)

Prerequisite: Speech Communication 150; 176 recommended. Rhetorical and communicative theories of public speaking; development of speech skills through

analysis, preparation and delivery of speeches; emphasis on forms and strategies of human symbolic communication.

371 Persuasive Communication (4)

Study and application of rhetorical and social-psychological principles of persuasion. Consideration of attitude change models and behavioral studies of variables affecting persuasion. Opportunity for preparation and criticism of persuasive discourse.

377 Forensics (2)

Prerequisite: Speech Communication 277 or equivalent, or consent of instructor. Faculty supervised workshop in preparation and presentation of University-sponsored speech and forensic activities, preparation for tournament events, participation in major performance before high school assemblies and civic organizations. May be repeated to maximum of 6 units.

388 Symbolic Processes in Language (4)

Prerequisite: Speech Communication 150. Effects of symbols upon communication and noncommunication behavior; cognitive processes of meaning in language encoding and decoding; applications of semantic measurement to communication research.

389 Introduction to Communication Theory (4)

Prerequisite: Speech Communication 150. Behaviorally oriented synthesis of theories by which communication process may be viewed and investigated: variables involved in these theories.

398 Cooperative Education (1-2)

Prerequisites: Overall g.p.a. of 2.35, upper division standing in departmental major or minor, and approval by departmental coordinator prior to registration. Active employment, with regular meetings to discuss student's progress. May be repeated to maximum of 6 units. Graded CR/NC only.

454 Selected Studies in Speech Communication (2-4)

Prerequisite: Varies with topic; see *Schedule of Classes* for specific prerequisites. Intensive study of selected topics in speech communication. May be repeated for credit as subject matter changes.

456 Development of Verbal Behavior in Early Childhood (4)*(Also listed as Speech Pathology 456)*

Acquisition of language forms and speech behavior; sequence of language and speech functions in the preschool years.

461 Descriptive Phonetics (4)*(Also listed as Speech Pathology 461)*

Phonetic-phonemic analysis of language; study of physical and physiological bases of speech.

462AB Speech Science (2-2)*(Also listed as Speech Pathology 462AB)*

462A: Structures of the body, functions, interrelationships to speech and language production, with emphasis on respiration, phonation and articulation.

462B: Structures of nervous system, functions, inter-relationships to speech and language production. Acoustic characteristics of speech signal related to production of speech sounds.

463 Psychology of Speech (4)

Nature, origin and purposes of speech; basic psychological principles, communicative process, application to individual and group communication, personality and speech.

467 Studies in Esthetic Bases of Speech (4)

Prerequisite: One course in Speech Communication. Studies in esthetic forms and functions of oral language with attention to selected theories of speech communication from an oral interpretation perspective.

472 Studies in Literature of International Public Discourse (4)

Prerequisite: One course in speech communication or consent of instructor. Analysis and evaluation of international rhetoric and speech communication. Some attention to great international speakers and speeches. Emphasis on communication in contemporary social, political and cultural movements and campaigns.

473A Studies in Literature of American Public Discourse to 1860 (4)

Prerequisite: One course in speech communication or consent of instructor. Analysis and evaluation of American rhetoric and speech communication. Some attention to great speakers and speeches. Emphasis on communication in social, political and cultural movements and campaigns; colonial times to 1860.

473B Studies in Literature of American Public Discourse 1860 to Present (4)

Prerequisite: One course in speech communication or consent of instructor. Analysis and evaluation of American rhetoric and speech communication. Some attention to great speakers and speeches. Emphasis on communication in social, political and cultural movements and campaigns; 1860 to present.

478 Group Communication: Dynamics of Leadership and Participation (4)

Prerequisite: Course in group discussion or consent of instructor. Advanced study of communication processes in small groups and effects of leadership and participation; development of communication sensitivity.

480 Rhetorical Theory: Greek and Roman (4)

Prerequisite: Upper division standing. Historical survey of theories of rhetoric from Plato to Alcuir.

481 Rhetorical Theory: Renaissance and Modern (4)

Prerequisite: Upper division standing. Historical survey of theories of rhetoric from Bacon to Winans.

482 Rhetorical Theory: Contemporary Developments (4)

Prerequisite: Speech Communication 480 or 481 or consent of instructor. Survey of contemporary theories of rhetoric and communication.

485 Rhetorical Criticism (4)

Prerequisite: One course in Speech Communication. Nature and function of rhetorical criticism; survey of approaches, theories and systems of rhetorical analysis from classical to contemporary. Practice in critical appraisal of various types of speech communication.

487 Proseminar: Experimental Research in Speech (4)

Prerequisite: Upper division standing. Introduction to methodology of experimental research and critical analysis of representative studies in speech.

488 Psycholinguistic Aspects of Speech Communication (4)

Prerequisite: Speech Communication 463 or Psychology 420 or English 401. Human language encoding and decoding processes; theories of semantic, syntactic, and phonological components of speech production, perception, and interpretation; implications for understanding of human communication and noncommunication behavior.

489 Intercultural Communication (4)

Prerequisite: Speech Communication 150. Description and analysis of cultural influences on human communication acts; codes and paralinguistic elements; focus on communication between cultures in an urban setting.

490 Studies in Children's Speech Arts (4)

Theory and criticism of creative dramatics, choric interpretation and storytelling.

491 Instructional Theories in Speech Communication (4)

Prerequisite: Senior standing, completion of 20 units in upper division speech communication courses, or consent of instructor. Philosophy of speech communication in educational settings; survey of contemporary trends in speech communication as revealed in professional literature.

494 Speech Communication Behavior in Early Childhood (4)

Oral language and communicative behavior in child ages 4 to 8; studies in speech and language experiences basic to development of communication skills.

499 Undergraduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Project selected in conference with sponsor before registration; progress meetings held regularly, and final report submitted. May be repeated for credit.

Courses in Speech Pathology

160 Voice and Diction (3)

(Also listed as Speech Communication 160)

Essentials of normal speech with training in voice production, articulation, pronunciation, projection and related oral skills.

*Upper Division Courses***434 Speech Disorders (4)**

Causes, characteristics and treatment of speech and language disorders. Designed to acquaint special education teacher with common speech and language problems of children; serves as basic course for majors in Speech Pathology.

435 Advanced Problems in Psychological Speech Disorders (3)

Prerequisites: Speech Pathology 434, 456, 461 and 462AB or equivalents; Speech Pathology 445X must be taken concurrently. Psychological implications of speech and language disorders with emphasis on delayed speech, stuttering; parent conferencing, therapeutic approaches.

436 Advanced Problems in Neuropathologies of Speech and Language (3)

Prerequisites: Speech Pathology 434, 456, 461 and 462AB or equivalents; Speech Pathology 445Y must be taken concurrently. Speech and language disorders associated with neuropathologies and with mental deficiency; therapeutic approaches.

437 Advanced Problems in Voice and Articulation Disorders (3)

Prerequisites: Speech Pathology 434, 456, 461 and 462AB or equivalents; Speech Pathology 445Z must be taken concurrently. Voice and articulation disorders, both functional and organic, including speech disorders associated with oro-facial anomalies; therapeutic approaches.

439 Selected Studies in Speech Pathology (4)

Prerequisite: Speech Pathology 434 or equivalent. Intensive study of specialized area of speech pathology. Subjects will vary. May be repeated for credit as subject matter changes.

440 Speech Problems in the Classroom (4)

Identification of common deviations in development and function of oral language in children: techniques for appropriate improvement. Designed for elementary classroom teachers, not Special Education or Speech Pathology majors.

442 Speech and Language Problems of Neurologically Handicapped Child Including Cerebral Palsied (3)

Prerequisite: Speech Pathology 434. Analysis of sensory-motor and symbolic dysfunctions affecting acquisition of speech and language in impairments of nervous system; diagnostic consideration, differential approaches to habilitation in educational and clinical settings. Required observation and reports.

445XYZ Observation in Speech Pathology (1-1-1)

Prerequisite: Speech Pathology 434. Laboratory observation of diagnosis and therapy in clinical and school settings. One unit must be taken concurrently with Speech Pathology 435, 436 and 437.

446 Diagnostic Procedures in Speech Disorders (3)

Prerequisites: Speech Pathology 435, 436 and 437 or equivalents. Procedures for studying and evaluating various etiological factors by observation and experience with speech and language handicapped individuals. Independent supervised clinical experience. May be repeated once for credit.

447AB Language, Speech and Hearing Service in the Public Schools (1-1)

Prerequisites: Speech Pathology 435, 436 and 461; one unit must be taken concurrently with each quarter of directed teaching. Role of language, speech and hearing specialist; emphasis on implementation of specialized techniques and procedures for public school setting.

448 Clinical Practice in Speech and Language Disorders (2)

Prerequisites: Speech Pathology 435, 436, 437, and Audiology 402 or equivalents. Students must earn a grade of C or better in all courses in Speech Pathology and Audiology taken prior to admission to clinic. Observation and supervised clinical experience in individual diagnostic and therapeutic procedures with speech handicapped children and adults. May be repeated once for credit.

449 Role of Speech Pathologist in Professional Settings (1)

Prerequisite: To be taken concurrently with Speech Pathology 448. Employment opportunities; duties and responsibilities in various professional settings; professional ethics; credential, licensing and certification requirements.

456 Development of Verbal Behavior in Early Childhood (4)

(Also listed as Speech Communication 456)

Acquisition of language forms and speech behavior; sequence of language and speech functions in pre-school years.

461 Descriptive Phonetics (4)

(Also listed as Speech Communication 461)

Phonetic-phonemic analysis of language: physical and physiological bases of speech.

462AB Speech Science (2-2)

(Also listed as Speech Communication 462AB)

462A: Structures and functions of body related to speech and language production, with emphasis on respiration, phonation, and articulation.

462B: Structures and functions of nervous system related to speech and language production. Acoustic characteristics of speech signal related to production of speech sounds.

499 Undergraduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Project selected in conference with sponsor before registration; progress meetings held regularly and final report submitted. May be repeated for credit.

Urban Studies

In School of Letters and Science

The program in Urban Studies is designed to prepare students for careers in the urban community by providing an interdisciplinary major focused on the urban community, its environment and problems. In addition, the program provides opportunities through multidisciplinary study for developing competency in such fields as business, child development, economics, education, engineering, geography, health, home economics, industrial studies, political science, psychology, and sociology. The Urban Studies program is administered by the Department of Geography.

The Faculty

The faculty for this interdisciplinary program is provided from the Schools of Business and Economics, Education, Fine and Applied Arts, and Letters and Science. Advisement information is available in the Department of Geography.

The Undergraduate Program

The Bachelor of Arts degree in Urban Studies combines breadth in several disciplines with a concentration in one discipline, according to individual interests.

Requirements for the Major

The major in Urban Studies requires 70–75 units, of which 38–40 are selected from specified courses. Of the remaining 32–36 elective units, 20 are selected from a specific adjunct field such as anthropology, biology, chemistry, economics, home economics, physics, political science, or sociology. The remaining 12–16 elective units are selected from other urban-related areas of study.

Students are cautioned that several of the required and elective courses have prerequisites; these must be satisfied before enrolling in the required courses.

Lower Division

Required Courses (6-8 units):

Select one of following statistics courses:

In Business:

209 Applied Business and Economics Statistics I (3)

In Political Science:

280 Quantitative Methods in Political Science (4)

In Sociology:

210A Elementary Statistics (3)

Select one of the following technology courses:

In Engineering:

250 Impact of Technology on Society (4)

352N Technological Aspects of the Urban Environment (4)

In Industrial Studies:

200 History of Technology (3)

Upper Division

Required Courses (32 units):

In Urban Studies:

400 Proseminar in Urban Problems (4)

401 Senior Project (4)

In Economics:

350 Economics of Poverty in U.S. (4)

or

440 Urban and Regional Economics (4)

In Geography:

476 Geography of Urban Areas (4)

In History:

483 Rise of Urban America (4)

In Home Economics:

441 Urban Family, Its Resources (4)

In Political Science:

403 State and Local Government (4)

or

404 Urban Government and Politics (4)

In Sociology:

430 Urban Sociology (4)

Elective Courses (32–36 units):

Three groups of electives are chosen for depth and breadth.

(1) Select at least 20 units, in consultation with an Urban Studies adviser, to develop competence in an adjunct specialization.

(2) Select one course from each of two of the following academic subject areas, with approval of an Urban Studies adviser for a total of 6–8 units. Courses selected may not be the same as those taken as part of adjunct specialization under (1) or as part of the core requirement above. The following are recommended:

Anthropology 430, 440, 462

Biology 361N

Chicano Studies 410A, 430, 450, 470A

Economics 350, 440

Engineering 250, 352N

Geography 475

Pan-African Studies 414, 425, 440A

270 / URBAN STUDIES

Philosophy 410, 420, 490

Political Science 403, 404, 414, 461, 477

Psychology 420, 422, 441, 447

Sociology 420, 422, 442, 444, 460

(3) Select 6–8 units with approval of an Urban Studies adviser from each of two of following academic subject areas. Courses must be selected from areas other than that taken for adjunct specialization.

Art 443, 446

Criminal Justice 101, 222, 460

Educational Foundations 437

Educational Guidance and Counseling 460

Elementary Education 464

Secondary Education 200, 425

Health and Safety 360, 455, 467, 468, 475

Home Economics 120, 220, 250, 440, 460

Industrial Studies 101, 110, 200, 290

Music 219, 304, 452, 453, 456, 457

Nursing 466

Physical Education 151pd, 460, 473

Recreation 331, 344, 360, 361

Minor in Urban Studies

A minor in Urban Studies is available for students majoring in other fields. A total of 34–36 units is required.

Lower Division

Required Courses (6–8 units):

Select *one* of following statistics courses:

In Business:

209 Applied Business and Economics Statistics I (3)

In Political Science:

280 Quantitative Methods in Political Science (4)

In Sociology:

210A Elementary Statistics (3)

Select *one* of following technology courses:

In Engineering:

250 Impact of Technology on Society (4)

352N Technological Aspects of the Urban Environment (4)

or

In Industrial Studies:

200 History of Technology (4)

Upper Division

Required Courses (28 units):

In Urban Studies:

400 Proseminar in Urban Problems (3)

In Economics:

Select *one* of following:

350 Economics of Poverty in U.S. (4)

440 Urban and Regional Economics (4)

In Geography:

476 Geography of Urban Areas (4)

In History:

483 Rise of Urban America (4)

In Home Economics:

441 Urban Family, Its Resources (4)

In Political Science:

Select *one* of following:

403 State and Local Government (4)

404 Urban Government and Politics (4)

In Sociology:

430 Urban Sociology (4)

Courses of Instruction

Upper Division Courses

400 Proseminar in Urban Problems (4)

Prerequisite: Completion of all other requirements for Urban Studies major or minor. Analysis of specific urban problems and potential solutions from an interdisciplinary perspective. May be repeated as subject matter changes.

401 Senior Project (4)

Prerequisite: Completion of all other requirements for Urban Studies major or minor and prior approval of project by advisory committee. May be taken concurrently with Urban Studies 400. Interdisciplinary group project; identification of specific urban problems, application of special skills in assembling information, proposing and initiating implementation of solution. May be repeated once for credit.

454 Selected Topics in Urban Studies (1-6)

Current topics of special interest to students in Urban Studies and related fields. Content varies; see *Schedule of Classes* for specific topic. May be repeated for credit.

499 Undergraduate Directed Study (1-4)

Prerequisites: Consent of an instructor to act as sponsor, and approval of coordinator. Project selected in conference with sponsor before registration; progress meetings held regularly; final report required. May be repeated for credit.

GRADUATE PROGRAMS



Directory of University and School Graduate Studies Offices

**For calls from off campus, dial 224 prefix, then the 4-digit extension number.*

	LOCATION	*PHONE
University Graduate Studies Office	Admin 707	3307
Gaby Stuart, <i>Associate Dean of Academic Planning, Graduate Studies</i>		
Graduation Section	Admin 414	2145
Office of Admission and Records	Admin 128	2141
Office of Financial Aids	Admin 125	3187
Library Thesis Office	Lib S2076	2255
Office of Veterans Affairs	Admin 127E	2448
School of Business and Economics		
Laird Allison, <i>Associate Dean, Operations</i> (In charge of graduate student affairs)	ST C144	2727
School of Education		
Carleton B. Shay, <i>Associate Dean, Academic Affairs</i>	KH D2070	3161
School of Engineering		
Martin S. Roden, <i>Associate Dean and Coordinator of Graduate Studies</i>	E&IS 238	2438
Graduate Advisement Center	E&IS A242	3235
School of Fine and Applied Arts		
Albert R. Wise, <i>Associate Dean, Graduate Studies</i>	FA 129	3435
School of Letters and Science		
Howard P. Holladay, <i>Associate Dean, Instruction</i>	KH D1050	2541

DEPARTMENTS AND CHAIRPERSONS OR COORDINATORS

**For calls from off campus, dial 224 prefix, then the 4-digit extension number.*

	LOCATION	*PHONE
American Studies, Charles Beckwith	KH C4073	2787
Anthropology, Richard L. Stone	KH C4068	2571
Art, Theodore W. Little	FA 332	3521
Biology, Richard J. Vogl	Biol Sc 140	3258
Business		
Accounting and Business Information Systems, E. Kennedy Cobb	ST F517	3887
Business Education, Ralph Spanswick	ST F517	3887
Economics and Statistics, Donald Moore	ST F917	3884
Finance and Law, Gordon D. Severance	ST F717	3881
Management, Emanuel Salemi	ST F717	3881
Marketing and Transportation, Marshall Reddick	ST F917	3884

Chemistry, Anthony Fratiello (Acting)	Phys Sc 613	3613
Criminal Justice, G. Douglas Gourley	KH D1045	3713
Education		
Area of Special Interest, Carleton B. Shay	KH D2070	3161
Educational Administration, Gerald Rasmussen	KH D2067	3784
Educational Foundations, Julian Roth	KH A2028	3737
Elementary, Earl W. Denny	KH C2097	3762
Guidance and Pupil Personnel Services, J. Leonard Steinberg	KH C1065	3705
Reading, Constance Amsden	KH C160F	3679
Secondary, Albert A. Lindquist	KH C2098	3765
Special Education, C. Lamar Mayer	KH C1064	3711
Engineering		
Civil, Anjan K. Bhaumik	E&IS A136	2520
Electrical, Roger Brandt	E&IS A234	3552
Mechanical, Phillip I. Gold	E&IS A222	2479
English, Sidney Richman	E&IS A605	3722
Foreign Languages and Literatures, Abdallah Beddawi	KH D1054	3716
Geography, William Byron	KH C4067	3822
Geology, Alan Colville	Phys Sc 218	3388
Health and Safety Studies, Ben F. Scherer	E&IS A317	3356
Health Care Management, William G. Baker, III	ST C144	2727
History, Neil Rabbitoy	KH C4066	3843
Home Economics, Margaret McWilliams	FA 238	3682
Industrial Studies, Kenneth Phillips	E&IS A336	3221
Latin American Studies, Louis C. De Armond	Lib B552	2878
Mathematics, Charles Clark	ST F207	3287
Microbiology and Public Health, Kenneth L. Anderson	Biol Sc 140	3531
Music, Charles M. Hubbard	Mus 145	3448
Nursing, Ruth Wu	ST F417	3421
Philosophy, Donald R. Burrill	Mus 202	3477
Physical Education and Athletics, William E. Wilgus	PE 206	3216
Physics, Demetrius Margaziotis	Phys Sc 315	3607
Political Science, Edward M. Goldberg	E&IS 523	2891
Public Administration, Edward M. Goldberg	E&IS A533	2564
Social Science, Benjamin W. Smith	E&IS A533	2564
Psychology, Jerry Tate	KH C3103	3841
Recreation, James G. Dunkelberg	PE 104	3351
Sociology, Marion V. Dearman	KH C3093	3837
Special Major, Gaby Stuart	Admin 707	3307
Speech Communication and Drama, Beverly L. Hendricks	Mus 104	3457
Speech Pathology and Audiology		
Speech Pathology, Robert Douglass	Mus 205	3466
Audiology, Harry Wall	KH C1064	3711

Graduate Degrees Offered

Master of Arts Degrees

American Studies
Anthropology
Art
Business Education
Drama
Economics
Education

Options: Educational Administration,
Educational Foundations Elementary
Teaching, Reading, Secondary
Teaching, Special Education,
Special Interest (Area of),
Urban Education

English
French
Geography
Health and Safety Studies
History

Home Economics
Industrial Arts
Latin-American Studies
Music

Options: Music Composition
(Musicology or Performance),
Music Education

Philosophy
Physical Education
Psychology
Social Science
Sociology
Spanish
Special Major
Special Communication
Speech Pathology and
Audiology
Vocational Education

Master of Science Degrees

Biology
Business Administration
Options: Accounting, Business
Economics, Business Education,
Finance, Management,
Marketing

Chemistry
Also, *Option:* Biochemistry

Counseling
Options: Community College
Counseling, Rehabilitation
Counseling, School Counseling

Criminalistics
Criminal Justice

Engineering
Civil, Electrical, Mechanical

Geology
Health Care Management
Mathematics

Options: Applied Mathematics,
Pure Mathematics

Microbiology

Nursing
Concentrations: Nursing Care of
the Adult, Nursing Care
of the Child

Physics
Psychology
Public Administration
Recreation
Special Major

Master of Business Administration

Doctor of Philosophy in Special Education

Graduate Programs

Graduate study has been a major part of the academic commitment of California State University, Los Angeles, since its founding. Those engaged in graduate study constitute one third of the total student body.

The University offers Master of Arts degrees in 26 areas and Master of Science degrees in 18, with opportunities for additional specialization through the selection of options within degree programs. Also offered are the Master of Business Administration degree the Master of Arts and Master of Science degrees in the Special Major, and the Doctor of Philosophy degree in Special Education. The complete list of degrees offered in each of the five schools appears on the opposite page.

The *Master of Arts* (M.A.) degree provides opportunities to achieve one or more of the following:

- (1) Improvement of professional competence.
- (2) Development of ability for continued self-directed study in a field of specialization.
- (3) Broadening of cultural background, development of personal and social responsibility, and preparation for vocational and community leadership.

The *Master of Science* (M.S.) degree provides the opportunity for improvement of professional competence and the development of ability for continuing self-directed study in some of the areas in which specialized research and information techniques are required.

The *Master of Business Administration* (M.B.A.) degree is offered as a two-year program of professional preparation for management positions in business and industry.

The *Doctor of Philosophy* (Ph.D.) degree in Special Education, which provides advanced preparation in this diverse professional field, is offered jointly with the University of California, Los Angeles.

SPECIAL MAJOR FOR MASTER'S DEGREES

The Special Major for the Master of Arts or Master of Science degree is a highly restricted interdisciplinary program for students whose professional/academic objectives are so unique they cannot be met by existing master's degree offerings. It is a program comprised of course offerings from at least two departments in related disciplines and must provide sharp focus and appropriate coherence.

ADMISSION TO THE PROGRAM

In addition to meeting minimum university requirements for admission to classified graduate standing, applicants must possess a bachelor's degree in an area cognate to the areas of the proposed special major and must meet all school requirements and such departmental requirements as course prerequisites, test scores, and grade point average for the master's degrees of the schools and departments in which course work for the special major is proposed. Approval of the special major is based upon individual justification. Students make formal application in writing to the Associate Dean of Academic Planning for Graduate Studies and must include the following:

- (1) A clear and concisely stated rationale for pursuing a Special Major and an indication of the professional/academic objectives to be achieved thereby.
- (2) A proposed list of available courses chosen from two or more departments totalling a minimum of 45 units, of which at least 23 units must be 500-level.
- (3) An indication of whether comprehensive examination or thesis or project is to culminate the graduate course of study; if a thesis or project is proposed, a preliminary description of the topic or research is to be included; if a comprehensive examination is proposed, an indication of the areas in which the student is to be examined is to be included.
- (4) The names and areas of specialization of at least two faculty advisers representative of the student's fields of study who have indicated their consent to serve on the

student's graduate advisory committee, including comprehensive examination committee or thesis or project committee.

- (5) The approval of the graduate dean(s) within whose school(s) course work is to be taken.

Approval of the special major and its subsequent administration rests with the Associate Dean of Academic Planning for Graduate Studies who shall also serve on the student's graduate advisory committee or shall designate an appropriate third committee member. The student's program is subject to the university graduate Procedures and Regulations that govern all graduate degree offerings.

Programs of Graduate Study

The University's graduate programs are coherent patterns of study designed for a level of academic accomplishment substantially beyond that required for the bachelor's degree. Graduate programs enable students to progress in their chosen vocations, to assume positions of leadership, and to contribute to the advancement of their professions. Graduate study helps students to develop greater awareness of themselves in relation to other people and cultures, both present and past, and to gain a better understanding of their particular professions. Completion of a master's degree program at Cal State L.A. also prepares students for further graduate study appropriate to their abilities and ambitions. In order better to serve the needs of employed students, classes are offered from 8 a.m. until 10 p.m. Graduate students thus can complete most or all degree requirements by taking classes offered in the late afternoon and evening.

Organization of Graduate Study

Graduate study at Cal State L.A. is organized and administered by each of the five schools of the University, with coordination provided by the Associate Dean of Academic Planning for Graduate Studies.

This *Graduate Programs* section of the University catalog describes the requirements, regulations, and procedures for engaging in graduate study, including lists of all courses which may be taken for graduate credit. General University regulations and procedures which apply to both undergraduate and post-baccalaureate or graduate students are set forth under "Admission" and "Procedures and Regulations" in the opening sections of this catalog.

Requirements for admission, advancement to classified graduate standing, candidacy, and graduation described in this section apply to all master's degree programs. Any additional requirements are stated in the departmental descriptions of programs.

International Programs

Graduate students may be eligible for study abroad under The California State University and Colleges International Programs. Information about cooperating universities abroad, eligibility requirements, and application procedures appears under "International Programs" in the opening chapter of this catalog.

Desirable Student Qualifications

In order to gain maximum benefit from post-baccalaureate or graduate study students should possess the following:

- (1) Sufficient knowledge and understanding of the chosen field of study to pursue it effectively at an advanced level.
- (2) Basic techniques, skills, and methods necessary for research investigation and other practical applications of knowledge.
- (3) Sufficient maturity and intellectual curiosity to undertake independent study and to pursue learning beyond regular assignments.
- (4) Achievements, aptitudes and abilities at superior levels, to assure scholarly performance considerably above the average.

Admission

Requirements for admission to post-baccalaureate and graduate study are in accordance with Title 5, Chapter 5, Subchapter 2 of the *California Administrative Code*. Students shall have completed a four-year college course and hold an acceptable baccalaureate degree from an accredited institution, or have equivalent academic preparation as determined by the University Graduate Studies Subcommittee. Applicants must also meet the professional, personal, academic, and other standards for graduate study, including qualifying examinations, prescribed by the University Graduate Studies Subcommittee.

Admission Categories

Students may be admitted to post-baccalaureate or graduate standing in any of the following categories:

Unclassified Post-baccalaureate Standing. For admission a student must meet the following requirements:

- (a) Hold an acceptable baccalaureate degree from an institution accredited by a regional accrediting association or have completed equivalent academic preparation as determined by an appropriate campus authority.
- (b) Have attained a grade point average of at least 2.50 in the last 90 quarter units attempted.
- (c) Have been in good standing at the last college attended.

Admission to unclassified post-baccalaureate standing does not constitute admission to a graduate degree curriculum.

SPECIAL ACTION: Applicants who were in good standing at the last college attended but who are not otherwise eligible may be admitted to unclassified post-baccalaureate standing by special action if they meet *one of the following* alternate university criteria:

- (1) Grade point average of 2.5 or higher in the last 16 quarter units of senior or graduate level courses at an accredited institution, including all units taken in the quarter in which the sixteenth unit falls.
- (2) Grade point average of 2.5 or higher in the undergraduate subject major.
- (3) Score of 400 or higher on either the Verbal or Quantitative Aptitude Test of the Graduate Record Examination.
- (4) Graduate degree from an accredited institution.

Applicants who do not meet the above objective alternate university criteria for graduate admission will be denied admission but will be informed of the above criteria so that they may attempt to meet one of them.

Similarly applicants will be informed of the following supplementary subjective criteria that may be used upon recommendation of the department and school:

- (1) Individual objectives in a specific area where acceptable potential has been demonstrated,

or

- (2) Post-baccalaureate experience which demonstrates potential in a specific area appropriate to the proposed graduate objective.

Classified Post-baccalaureate Standing. Students who are eligible for admission in unclassified post-baccalaureate standing may be admitted to classified post-baccalaureate standing for the purpose of enrolling in a particular post-baccalaureate credential or certificate program, provided that such additional professional, personal, scholastic, and other standards, including qualifying examinations, as may be prescribed for the particular program by the school graduate dean are satisfied.

Conditionally Classified Graduate Standing. Students who are eligible for admission under unclassified post-baccalaureate standing, but who have deficiencies in prerequisite prepa-

ration which in the opinion of the appropriate school graduate dean can be met by specified additional preparation, including qualifying examination, may be admitted to an authorized graduate degree curriculum with conditionally classified graduate standing.

Classified Graduate Standing. Students who are eligible for admission in unclassified post-baccalaureate or conditionally classified graduate standing may be admitted to an authorized graduate degree curriculum as classified graduate students if they satisfactorily meet the professional, personal, scholastic, or other standards for admission to the graduate degree curriculum, including qualifying examinations, as the school graduate dean may prescribe. Only those applicants who show promise of success and fitness will be admitted to graduate degree curricula, and only those who continue to demonstrate a satisfactory level of scholastic competence and fitness shall be eligible to proceed in such curricula.

Students usually are admitted initially to Cal State L.A. in unclassified post-baccalaureate standing. Those who meet all requirements for any other category may achieve such standing prior to their first quarter of enrollment. Applicants not regularly admissible may petition for admission by special action.

Admission of Graduates of Non-Accredited Institutions

A degree from a non-accredited college is not recognized for admission in post-baccalaureate or graduate standing. Graduates of such institutions may be admitted in undergraduate standing if course work completed is deemed acceptable and meets undergraduate admission requirements, and may be granted post-baccalaureate or graduate standing upon satisfaction of the following conditions:

- (1) Meet the minimum university, school, and departmental requirements for admission to classified graduate standing in a degree program.
- (2) Complete a minimum of four upper division courses (at least 14 quarter units), specified in advanced by the major department, with a grade point average of at least 3.0. These courses may not be 500-level, nor may they be used for graduate credit on the master's degree program.
- (3) Receive the written recommendation of the department in which the degree is sought and of the school graduate dean.
- (4) Receive the approval of the University Graduate Studies Subcommittee.

Admission of Graduates of Specialized or Professional Schools

Graduates of specialized or professional schools which are professionally accredited are admitted in conditional graduate status. They may be granted classified graduate standing if they satisfy the following conditions:

- (1) Meet the minimum university, school, and departmental requirements for admission to classified graduate standing in a degree program.
- (2) Complete a minimum of four upper division qualifying courses (at least 14 quarter units), specified in advanced by the major department, with a grade point average of at least 3.0.
- (3) Receive the written recommendation of the department in which the degree is sought and of the school graduate dean.

Admission of Foreign Visa Students

Foreign students seeking entry to the United States on the basis of acceptance by Cal State L.A. must file a special foreign student application, available from the Office of Admissions and Records, at least six months in advance of the quarter that admission is desired. In addition to the academic requirements outlined below, foreign students must have competence in the English language, have financial resources adequate to provide for all expenses during the period of study at Cal State L.A., and be in good health. Those admitted to this country on the basis of acceptance by another college are expected to complete at least

one year at that college before applying for admission to Cal State L.A.

For admission in post-baccalaureate or graduate standing, foreign students must fulfill the following minimum requirements:

- (1) Possess a bachelor's degree, or its equivalent, from an accredited institution.
- (2) Have a minimum grade point average of 2.50 (3.00 for business majors) in the last 90 quarter units equal to that required for admission to classified graduate standing.
- (3) Have approval of the academic department offering the desired degree program.
- (4) For graduates of universities in which the language of instruction is other than English, proficiency in the English language must be demonstrated by a score of at least 550 on the Test of English as a Foreign Language (TOEFL).

The U.S. Immigration Service requires an F-1 foreign visa graduate student to carry a minimum study load of 8 quarter units. Foreign students must comply with all University and Immigration Service regulations.

Foreign students should contact the foreign student counselor in the Counseling Center for information regarding housing, financial assistance, and related matters.

Admission of Students with Foreign Academic Work

Students with foreign academic work are required to submit official copies of academic records, along with a certified English translation. These records should include: (1) Secondary school records, (2) yearly records from each college or university attended indicating the number of hours per semester or per year devoted to each course and the grades received, and (3) official documents confirming award of the degree with the title and date.

All official documents submitted become the property of the University, and the acceptability of any foreign work will be determined by the University.

Application Procedures

All applicants for any type of post-baccalaureate status, e.g., master's degree applicants, those seeking credentials, those interested in taking courses for professional growth, must file a complete application with the filing period dates set forth on page 25. Second baccalaureate degree aspirants should apply as undergraduate degree applicants.

A complete application for post-baccalaureate status includes all of the materials required for undergraduate applicants plus the supplementary graduate admissions application. Applicants who completed undergraduate degree requirements at Cal State L.A. also are required to submit a new application and pay the \$20 application fee.

Since applicants for post-baccalaureate programs may be limited to the choice of a single campus on each application, redirection to alternative campuses or later changes of campus choice cannot be guaranteed. Post-baccalaureate applicants who wish to be assured initial consideration by more than one campus should submit a separate application with fee to each.

Application forms may be obtained from the Admissions Office or the Graduate Studies office of any California State University or College.

Separate applications are required by some departments at dates earlier in some instances than those required for University admission applications. These additional requirements are indicated in the descriptions of department programs.

Students accepted for post-baccalaureate or graduate study must enroll in the University in the quarter for which application was made. Failure to enroll will result in cancellation of admission; see "Reapplication after Failure to Enroll," page 26.

Transcript Requirements

Applicants with either degree or credential objectives must request that two copies of official transcripts be sent to the Office of Admissions and Records from each college attended. Applicants who are required to have one copy of their transcripts sent as part of their departmental application and those applying without a degree or credential objective are required to submit only one copy with their application.

All transcripts become the property of the University and will not be released or copied except for those which applicants request be redirected to another California State University or College. Processing of applications cannot be guaranteed unless all required documents are received during the designated application period. Individuals who do not file an application for admission are advised that transcripts are retained for two years, after which they are destroyed.

Test Score Requirements

The Graduate Record Examination (GRE) Aptitude Test (verbal and quantitative) is required of applicants seeking admission to some master's degree programs. GRE Advanced Tests in subject areas and/or combined scores are required for other programs. Applicants for admission to programs in Business Administration must take the Graduate Management Admissions Test (GMAT). Post-baccalaureate applicants for a credential program are advised to consult the School of Education section for tests required for admission to particular credential programs and to the Joint Doctor of Philosophy degree program.

The Graduate Record Examination dates for 1976-77 are reported in the academic calendar (page 2). Application forms are available in school graduate studies offices and the Testing Office. It is the responsibility of the applicant formally to request that all required test scores be mailed directly to the Cal State L.A. Testing Office.

Continuing Students

Students may elect to be absent for any two of four consecutive quarters without losing eligibility for re-registration, subject to the following conditions.

- (1) Students who have been absent for the quarter preceding the one for which they plan to enroll must file a "Continuing Student Request for Permit to Register", available at the Admissions Information Center, Administration 128. If the request is filed by the appropriate deadline, a permit to register is mailed; if the request is filed after the published deadline, a permit may be obtained at the Admissions Information Center during regular registration periods. Requests for permits to register in continuing student status must be filed by June 1 for Fall Quarter, September 15 for Winter Quarter, January 2 for Spring Quarter, and April 1 for Summer Quarter.
- (2) A permit to register will not be released to students who were scholastically disqualified following their most recent quarter of attendance at Cal State L.A.
- (3) Students who attend another college or university, except for a summer session or extension program, during an absence from Cal State L.A. must file an application for admission as a returning student, and must have official transcripts of work taken sent to the Office of Admissions and Records. The non-refundable \$20.00 application fee is charged. See "Returning Students", below.
- (4) Students who graduate from Cal State L.A. and wish to continue as graduate students must file a new application for admission. A supplemental graduate application form to be used for this purpose is available from the Office of Admissions and Records. An application fee of \$20.00 is charged.

Returning Students

Students who have been absent for three of four consecutive quarters prior to the quarter of application must apply for readmission. Those who were enrolled in any of the three quarters preceding re-entry are exempt from the application fee if they were not enrolled elsewhere during their absence.

Students who attend another institution during any absence, except for a summer session or extension program, must file an application for admission as a returning student and are subject to the non-refundable \$20.00 application fee.

Returning Veterans (Military or Alternative Service)

Students from this University entering active military service or approved alternative service and returning to this University following active service are eligible for continuing student status. The time students serve in active military or approved alternative service will not be counted as a break in attendance in determining continuing student status, including the entire quarter during which they enter the service and the entire quarter during which they are discharged.

Record of Grade Point Average

With their notification of admission, students are sent a form on which is indicated their grade point average in the last 90 quarter units, provided a post-baccalaureate or master's degree objective has been indicated on the application for admission and all required transcripts have been received.

Credit for Transfer Work

In order to receive credit toward a degree for post-baccalaureate work taken at other colleges or universities, students must have official transcripts forwarded to the Office of Admissions and Records, and must file a "Request for Records" (Form GS-1) with the department offering the degree. The University will honor credit for work taken at another college or university only when it appears on an official transcript from that institution. See "Limitations and Exclusions."

Credit by Examination

Graduate students who are in good standing and are enrolled in one or more residence courses may request permission to receive credit for courses by examination. The examination is interpreted broadly to include whatever activity, test, or demonstration the instructor deems appropriate for evaluating understanding, skills, or knowledge required by the objectives of the course.

Approval by the chairman of the department offering the course and the instructor in the course is required. Forms for approval are available at the Office of Admissions and Records. Additional fees must be paid if the added units alter total fees due for the quarter.

Credit by examination is restricted to eligible 400- and 500-level courses listed in this catalog. It is without unit limit, but does not count as residence credit. Credit by examination is not treated as part of the student's work load during a regular quarter and therefore does not require a petition for excess study load. However, total credit earned for courses and examinations taken in Summer Session may not exceed the limit established for Summer Session study. See "University Requirements for Master's Degrees," page 00.

Grades received in courses taken by examination are recorded on the permanent record as the final grade for the courses and are designated as *Credit by Examination*.

Transfer of Credit Earned by Examination

Credit earned by examination at other accredited institutions is accepted upon transfer, provided such units have been accepted by the previous institution and are not in violation of any other regulation.

Credit for Peace Corps Training

Peace Corps volunteers who completed training at Cal State L.A. may earn credit up to a maximum of one and one-half quarter units for each week of the training program, provided they held a baccalaureate degree from an accredited institution when they entered training on this campus, and provided they have been accepted for a post-baccalaureate or master's degree program at this or another institution of higher education. The number of units and the area in which the units are given vary with each project. Grades are recorded as *Credit*.

University credit will be validated when the volunteer becomes a student at this or another institution of higher education.

Procedures and Regulations

The procedures and regulations which follow apply specifically to post-baccalaureate and graduate study. Additional general procedures and regulations which apply to all University students, both graduate and undergraduate, are described in the general information section of this catalog, beginning on page 31.

Advisement

As the first step in the registration process, all students are required to obtain departmental approval of the courses selected for each quarter's study program. To assist in the initial advisement and course selection, newly admitted students need to have with them a personal copy of their college transcripts and the copy of their evaluation, if received.

Early in their first quarter of attendance students should make an appointment with a graduate adviser to plan a complete program of study for the degree, if this cannot be accomplished during the advisement session preceding the initial registration. This complete program becomes the basis for evaluating the student's eligibility for receiving a degree. Changes in the program of study may be made only with the approval of the student's adviser and school graduate dean.

Requirements for Classified Graduate Standing

All students who have declared a master's degree objective are admitted to and remain in conditionally classified standing until the following conditions are met. Classified graduate standing constitutes admission to an authorized graduate degree curriculum and is granted by the school graduate dean upon completion of all requirements listed below and upon the recommendation of the major department.

The requirements enumerated below are minimum University requirements. Departments or schools may utilize additional or more restrictive requirements for admission to classified graduate standing in individual master's degree curricula. The minimum University requirements for admission to classified graduate standing are:

- (1) A grade point average of 2.50 or higher computed on the last 90 quarter units of work which shall include all units taken in the quarter in which the 90th unit occurs. This grade point average shall not apply to students who hold an advanced degree from an accredited institution.

Students who have been admitted by special action must complete a minimum of 14 quarter units of upper division qualifying courses on a conditional master's degree program with a 3.0 grade point average with the following conditions:

- (a) Qualifying courses must be approved prior to their completion by the principal graduate adviser, the department and the school graduate dean.
 - (b) Upon recommendation of the principal graduate adviser and the department, and with the approval of the school graduate dean, qualifying courses may be waived for students whose post-baccalaureate work demonstrates promise of the scholarly ability required for graduate study. To be eligible for recommendation of such a waiver a student must have completed, with an overall grade point average of 3.0 or above, 14 quarter units or more of upper division or graduate level post-baccalaureate work at an accredited institution which is acceptable toward a master's degree at that institution.
 - (c) Failure to achieve a 3.0 grade point average in qualifying courses will result in termination in the degree program.
- (2) Certification by major department to the school graduate dean that all departmental admissions requirements and procedures and prerequisites have been completed.
 - (3) Filing of a conditional master's degree program with the school graduate dean during

the student's first quarter of graduate matriculation at Cal State L.A. The conditional program must be approved by the principal graduate adviser and the department. Any change in the conditional program must be approved by the principal graduate adviser, the department and the school graduate dean prior to completion of courses affected by the change. This includes courses in which a grade of "Incomplete" is received.

Admission to Classified Graduate Standing

When the department provides the school graduate dean with the necessary documentation that all requirements for classified graduate standing have been met, the conditional program, if filed, or the master's degree program then submitted will be approved by the school graduate dean and become the master's degree program. It is a statement of academic requirements which students must complete for the master's degree. Students must have an approved master's program before they can be advanced to candidacy.

Limitations and Exclusions

The following limitations and exclusions apply to individual master's degree programs, including conditional master's degree programs.

- (1) All qualifying courses, which are otherwise eligible, may be included in a master's degree program if recommended by the principal graduate adviser and the department and approved by the school graduate dean. Approval to include qualifying courses on the master's degree program must be obtained prior to completion of these courses.
- (2) No more than 13 quarter units of acceptable transfer work, extension and summer session courses may be included on a master's degree program.
- (3) No more than 13 quarter units of acceptable course work completed prior to approval of the principal graduate adviser, department and school graduate dean may be included on a master's degree program. This includes acceptable transfer work. Credit for thesis (e.g. 599), research (e.g. 597), or comprehensive examinations is not transferable. All other course work included on the master's degree program must be completed after approval by the principal graduate adviser, department and school graduate dean. This policy shall not apply to students admitted to a master's degree program offered jointly with other educational institutions.
- (4) No more than 9 quarter units beyond the total number of units approved at the time of achieving classified graduate standing may be added to a student's master's degree program.
- (5) A course may not be added to or deleted from a master's degree program after it has been taken. Any change in the master's degree program must be approved in advance by the principal graduate adviser, the department and the school graduate dean. When such a change has been approved it becomes part of the master's degree program.
- (6) No graduate credit will be allowed for extension courses that would not be accepted toward a master's degree at the offering institution (e.g. University of California extension courses in the X300 or X400 series) unless specifically approved in advance by the department and school concerned.
- (7) No courses taken as an undergraduate may be included on a master's degree program except as specifically provided for bachelor's degree candidates in their final quarter of undergraduate study. See page 000.
- (8) No credit toward a master's degree is allowed for course work taken to meet necessary undergraduate preparation for a master's degree program.
- (9) No credit toward a master's degree is allowed for student teaching, 700- or 800-level courses, courses numbered below 400, or courses taken at another accredited institution which would not be accepted toward a master's degree at that institution.
- (10) No credit will be granted for any course completed more than seven years prior to

granting the master's degree. In extraordinary circumstances students may petition and the school may grant permission to validate such an expired course by an examination given by and with the concurrence of the department offering the course. An expired course taken at another institution may not be validated by examination.

University Requirements for Master's Degrees

All programs of study for master's degrees at Cal State L.A. must meet the following minimum requirements:

- (1) At least 45 quarter units in approved courses, of which a minimum of 23 units must be in graduate (500-level) courses. Master's degree programs whose minimum total units are established at more than 45 quarter units must include at least half of those units in courses at the graduate (500) level.
- (2) At least 32 quarter units completed in residence at the University.
- (3) A comprehensive examination, or a thesis or project.

Students whose programs require a comprehensive examination must declare to their major department, at least one quarter in advance, their intent to take it, obtain departmental permission, and register for comprehensive examination. If not enrolled in any credit-bearing course during the quarter in which they take the comprehensive examination students must pay the comprehensive examination fee (\$10). Students whose programs require a thesis or project must submit two bound copies (original and first carbon or Xerox) to the Library. These will be bound upon payment of the \$10 fee and retained in the Library.

Advancement to Candidacy

Advancement to candidacy is a part of the continuing process of review of the student's progress and is not automatic. It is granted by the school graduate dean upon completion of the requirements listed below and upon the recommendation of the department. It is the University prerequisite to enrolling for the thesis or project and to taking the comprehensive examination; departments and schools may have additional requirements. Advancement to candidacy requires:

- (1) Classified graduate standing.
- (2) An approved master's degree program.
- (3) Completion of a minimum of 16 quarter units of the master's degree program with an overall grade point average of 3.0 or above.
- (4) Recommendation of the major department.
- (5) Approval of the school graduate dean.

Admission to 500-Level Courses

With the following exceptions, classified graduate standing or its equivalent is required for admission to all 500-level courses and for receiving credit toward the master's degree for 500-level courses:

- (1) A classified post-baccalaureate credential candidate may enroll in those 500-level courses which are required in the credential program in which the student has been classified.
- (2) Undergraduate students may, with prior approval and subject to policies governing graduate credit for undergraduate students, enroll in one 500-level course. See page 35.
- (3) In highly structured departmental programs the sequentialness of some course offerings may require enrollment of students in 500-level courses prior to their attainment of classified graduate standing if timely progress toward the degree is to be made. Departments with such highly structured programs may request school and University approval for students to enroll in a maximum of 9 quarter units of 500-level work prior to attainment of classified graduate standing provided the student (a) is otherwise

eligible, and (b) has obtained the approval of the principal graduate adviser and the instructor prior to enrollment.

- (4) In extraordinary circumstances and with the prior approval of the principal graduate adviser, the department and the school graduate dean, conditionally classified students may be given permission to enroll in one 500-level course prior to their attainment of classified graduate standing.

Study Load

The maximum study load for students working toward a master's degree is 16 units per quarter. The minimum study load for foreign visa students working toward a master's degree is 8 units per quarter.

Graduate Grading

The following grading system applies for post-baccalaureate study: A, B, C, D, F (traditional), with A, B, C indicating passing grades and D and F indicating failing grades; SP; CR/NC, with CR indicating work of such quality as to warrant a grade of B or better in courses taken as a post-baccalaureate or graduate student, including 400-level courses.

A course in which a post-baccalaureate or graduate student earns a grade below C must be repeated, with the grades earned in the original enrollment and the repeat enrollment averaged when computing the grade point average.

For further description of grades and the grading system, see this subject under "Procedures and Regulations" in the opening section of the catalog.

Requirements for Second Master's Degree

Students who have earned a master's degree at Cal State L.A. and wish to obtain a second master's degree from this University must complete a minimum of 23 quarter units of new work and must satisfy all other requirements for the new degree. Advancement to candidacy for the second degree will be granted only after the first degree has been awarded.

Responsibility of the Student

Responsibility for meeting all requirements and following all procedures rests with the student. In extraordinary circumstances exceptions to requirements for graduate study established by departments, schools, and the University may be granted.

Probation and Disqualification

Post-baccalaureate and graduate students are subject to the same probation and disqualification criteria for administrative/academic deficiencies as undergraduate students described on page 39. In addition, the following criteria apply:

- (1) Conditionally classified and classified graduate students are placed on scholastic probation if they fail to maintain a cumulative grade point average of 3.0 in all units attempted subsequent to admission to conditionally classified or classified graduate standing. If they do not bring their grade point average up to 3.0 in the following two quarters in residence they are subject to disqualification from the program in which they were classified or conditionally classified. Conditionally classified and classified graduate students whose grade point average falls more than nine grade points below 3.0 are disqualified from pursuing the program in which they were classified or conditionally classified.

Students who have been disqualified from a master's degree program may be admitted to another degree program only on the recommendation of the department concerned and with the approval of the appropriate school graduate dean.

- (2) Unclassified and classified post-baccalaureate students are placed on scholastic probation if their grade point average falls below 2.50. If they do not bring the grade point average up to 2.50 in the following two quarters in residence they are disqualified from pursuing work at the University.

Students disqualified for scholarship deficiency may not enroll in any regular session of the campus without permission from the appropriate school graduate dean and may be denied admission to other educational programs operated or sponsored by the campus. Students attempting a second baccalaureate degree are subject to the same probation and disqualification standards as seniors.

Requirements for Graduation

Formal application must be made by candidates not later than the last day of the quarter preceding the final quarter of study at Cal State L.A. An application submitted during the final quarter of study will not be processed until the following quarter. The application form may be obtained from the Office of Admissions and Records or the Graduate Studies Office in each school, and must be deposited, with the diploma fee, at the Cashier's Office.

Qualifications for graduation which must be met by candidates are as follows:

- (1) Completion of the final approved program and any special departmental requirements, and the passing of a comprehensive examination or the filing of a thesis or project report approved by the University Graduate Studies Subcommittee.
- (2) Achievement of at least a 3.0 grade point average in all courses on the approved degree program. A grade of C is allowed on the program; however, any grade below C requires that the course be repeated with both grades computed in the grade point average.
- (3) Recommendation for the degree by the faculty.

Comprehensive and Foreign Language Examinations Fees

Graduate students not registered for courses bearing academic credit are charged a non-refundable \$10 fee for taking the comprehensive examination or any part thereof, or the graduate foreign language reading examination. Payment of Student Services, Facilities, and Associated Student fees or any tuition charges are not required.

Research and Thesis Consultation

Graduate students completing thesis and research requirements for master's degrees must be regularly enrolled during any quarter in which they use University facilities or consult with faculty. Students who have previously enrolled for all allowable research or thesis credit must register in Graduate Studies 900. Permission to enter this course is by petition approved by the student's adviser, departmental graduate adviser or department chairperson, school graduate dean, and the Associate Dean of Academic Planning for Graduate Studies.

Students electing comprehensive examination options are not permitted to enroll in Graduate Studies 900. Also, enrollment is not open to students who have exceeded the time limitations associated with the *SP* grading symbol, unless they have received a prior extension of this time period.

Standards for Theses and Project Reports

The thesis or project for the master's degree requires the same levels of performance; they differ only in the nature of the work involved in producing them. The thesis represents independent research or investigative study; the project involves creative work resulting in such end-products as plays, recitals, handbooks, courses of study, etc.

Required Format

The format required for either thesis or project, except where variations are specifically stated, is as follows:

- (1) The thesis will be submitted in its entirety.

- (2) A description-summary of the project will be submitted together with the project end-product (play, manual, etc.) where practical.
- (3) Abstracts of the thesis or project may be required by the department.
- (4) The thesis or project description-summary will follow the form and regulations described as recommended, preferred or standard, in the latest edition of Campbell's *Form and Style in Thesis Writing*. With approval of the department the Author and Number Bibliography/footnote format may be used. Candidates may also use such variations from Campbell's as are approved by the University Graduate Studies Subcommittee. Candidates may consult with the Library on such requirements. Copies of the Campbell handbook are available in the Library or may be purchased at the Trident Shop.
- (5) Library copies of the thesis or project description-summary and project end-products, where practical, are to be typed on 8½ x 11, 16 lb., 100% rag paper. Erasable bonds are not acceptable. Paper with blue-lined margins may be used. Errors may be corrected only by clean erasure or retyping, or by a method which lifts errors. Covering of errors by cement-over or any other chemical method is not acceptable.
- (6) Quality of typing is important. A list of typists qualified to prepare theses and projects is maintained in the Library.
- (7) The reproduction of charts, drawings and other illustrative materials must be done in a form and by a process that will be permanent as well as suitable for microfilming. Students are encouraged to consult with the Reference Room librarians, second floor of the Library, on reproduction processes.
- (8) The end-product of the project (play, manual, recital, painting) will follow whatever form is appropriate to the product and its intended use, except that written materials must conform to the standards for thesis and project summaries.
- (9) The University requires two bound copies of the thesis or project description-summary (with the end-product where practical). The original and first carbon copy (or an original and a Xerox copy, if preferred) will be bound and retained in the Library, which may make those copies other than the originals available for circulation. Students may have additional copies bound at their own expense.
- (10) If desired by the candidate and the department, other methods of presentation may be used with the approval of the University Graduate Studies Subcommittee.
- (11) The Library will advise on matters of thesis format.

Required Approval

Signatures of the thesis committee or the thesis director and the department head must appear on an official title approval page to be included with each bound copy. Signatures signify approval of both the content and form of the thesis or project by the department.

Procedure for Submission

The completed thesis or project must be submitted according to the following procedure:

- (1) The two copies signed by the thesis director and department head or thesis committee are taken by the student to the Reference Room on the second floor of the John F. Kennedy Memorial Library by the *last day of classes* in the quarter (i.e., prior to the final examination period).
- (2) The thesis record card received from the Library is taken first to the University Cashier, Bungalow D, where bindery costs are paid, and then the stamped thesis record card is taken to the University Graduate Studies Office, Administration 707.
- (3) The Library will examine the thesis or project and recommend approval or disapproval to the Associate Dean of Academic Planning for Graduate Studies and Research.
- (4) If the thesis or project is approved, the University Graduate Studies Office will notify Admissions and Records. If it is not approved, the Library will notify the student, the department, and the school graduate dean.

American Studies

In School of Letters and Science

The Master of Arts degree in American Studies is designed to promote a broad understanding of American society through a blending of courses in the arts, humanities, and social sciences. A group of interdisciplinary courses in American Studies serves to focus attention on specific aspects of American culture and to provide a means for American Studies majors to exchange ideas. Some vocational guidance is provided.

In general, the program meets the needs of those who plan to enter such professions as teaching, library work, journalism, law, government on county, state or federal levels, or positions in business where humanistic and comprehensive education is important.

Admission to the Program

A bachelor of arts degree with a major, or its equivalent, in any of the humanities, any of the social sciences, or in American Studies is required. In addition a minimum score of 500 on the Verbal Aptitude Test of the GRE and a 2.75 g.p.a. in the last 90 quarter units are required.

The program consists of an area of concentration, a choice between two options, and electives.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required.

Area of Concentration (17–21 units):

Required in American Studies (9 units):

501 Seminar: Selected Problems in American Civilization (3-3-3)

Electives in American Studies (8–12 units):

Select at least two from the following:

- 401 Study of American Culture (4)
- 402 Ideas in America (4)
- 403 American Popular Culture (4)
- 404 Avant-Garde in American Life (4)
- 405 Folklore in American Culture (4)
- 490 Selected Topics in American Studies (4)

Option (16–20 units):

Select either A or B option.

A: AMERICAN LANGUAGE AND LITERATURE

Select from following seminars:

In English:

- 520 Seminar in American Literature (4)
- 562 Seminar: Significant Intellectual Movements, Their Effect on Literature (4)

May be taken only when an American topic is offered.
Either of the above may be repeated for credit as subject matter changes.

In Speech Communication:

- 573 Seminar in American Public Address (4)
- 590 Seminar in Speech Education in America (4)

Option Electives (0–8 units):

Select 400-level courses from American Language and Literature listings for B.A. program, provided courses chosen, or equivalents, were not used to fulfill undergraduate degree requirements.

Additional Electives (4–8 units):

Select with approval of adviser; may include American Studies 598 to maximum of 6 units.

B: AMERICAN SOCIAL STUDIES

Select from following seminars:

In Economics:

- 571 Seminar: Economic History of U.S. (4)

In History:

- 571 Seminar: Early History of U.S. (4)
- 575 Seminar: Recent History of U.S. (4)
- 577 Seminar: American Social and Intellectual History (4)
- 581 Seminar: History of The U.S. West (4)

In Political Science:

- 505 Seminar: Contemporary American National Government (4)
- 510 Seminar: Political Theory (4)

In Psychology:

- 522 Seminar: Social Psychology (4)

In Social Science:

- 500 Seminar: Social Science (4)

In Sociology:

- 521 Seminar: The Sociology of Creative Behavior (4)
- 534 Seminar: Population Problems and Urbanization (4)
- 540 Seminar: Marriage and the Family (4)
- 544 Seminar: Social Organization and Institutions (4)

Option Electives (0–8 units):

Select 400-level courses from American Social Studies listings for B.A. program, provided courses chosen, or equivalents, were not used to fulfill undergraduate degree requirements.

Additional Electives (4–8 units):

Select with approval of adviser; may include American Studies 598 to maximum of 6 units.

Comprehensive Examination:

Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

This required written examination is administered by the interdepartmental American Studies Committee. If necessary, the written examination is supplemented by an oral one.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

- 401 Study of American Culture (4)
- 402 Ideas in America (4)
- 403 American Popular Culture (4)
- 404 The Avant-Garde in American Life (4)
- 405 Folklore in American Culture (4)
- 490 Selected Topics in American Studies (4)

Graduate Courses

Classified graduate standing required for admission.

501 Seminar: Selected Problems in American Civilization (3)

Prerequisite: One course from American Studies 401-404 sequence. Selected problems of both historical and contemporary significance whose ramifications in American life merit interdisciplinary considerations. May be repeated to maximum of 9 units.

598 Graduate Directed Study (1-4)

Prerequisites: Consent of an instructor to act as sponsor and approval of department. Independent study of advanced topics; regular conferences with sponsor. May be repeated for credit; maximum of 6 units may be applied to master's program.

Anthropology

In School of Letters and Science

The Master of Arts degree program in Anthropology provides training in six fields of study: (1) culture theory, (2) ethnography, (3) archeology, (4) linguistics, (5) social organization, and (6) physical anthropology.

Admission to the Program

Applicants must have a bachelor's degree in Anthropology, a 2.75 g.p.a. in the last 90 quarter units or a 3.0 g.p.a. in Anthropology courses, and a score of 400 on either the Verbal or Quantitative Aptitude Test of the GRE.

Students whose undergraduate major was not in Anthropology must complete 20 to 32 units in Anthropology, including Anthropology 497, with a g.p.a. of 3.0. The actual number of units required is determined in a qualifying conference during the student's first quarter of post-baccalaureate study.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required.

Language or Linguistic Proficiency

A reading or speaking knowledge of a relevant research language is required of all students, or they may elect to demonstrate proficiency in the linguistic analysis of a language approved by the department. This requirement must be completed before the comprehensive examination is attempted or before a thesis is submitted. Language proficiency may be demonstrated by passing a foreign language proficiency examination in the language selected as offered in the Department of Foreign Languages and Literatures, and with the approval of that department.

Required in Anthropology (8 units):

510AB Seminar: Anthropological Theory and Analysis (4-4)

Electives (31-37 units):

Select from 400- and 500-level courses in anthropology. At least four different 500-level courses must be selected. A maximum of 8 units in a related field may be included with prior consent of adviser. Total must include 6 units of Anthropology 599 if thesis option is elected.

Comprehensive Exam/Thesis (0, 6 units):

Comprehensive Examination

or

599 Thesis (6)

Students selecting the comprehensive examination should expect to take it in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements. Examinations are required in Culture Theory, and in

two of the following areas: Archaeology, Ethnography, Linguistics, Physical Anthropology.

Students selecting the thesis must have successive enrollments in Anthropology 599 for a total of 6 units.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

- 401 Cultures of the World (4)
- 403 Black Cultures of the New World (4)
- 404 Peoples of South America (4)
- 406 Indians of North America (4)
- 407 Indians of California (4)
- 408 Peasant Cultures of Middle America (4)
- 410 Peoples of the Pacific (4)
- 413 Peoples of Africa (4)
- 414 Peoples of Asia (4)
- 421 Archeology of North America (4)
- 423 Primitive Technology (4)
- 424 Archeological Research Techniques (6)
- 425 Archeology of the Old World (4)
- 430 Social Organization (4)
- 431 Economic Anthropology (4)
- 435 Psychological Anthropology (4)
- 437 Anthropology of Religion (4)
- 439 Anthropology of Political Systems (4)
- 440 Applied Anthropology (4)
- 443 Anthropology and Education (4)
- 444 Medical Anthropology (4)
- 445 Anthropological Folklore (4)
- 460 Human Evolution (4)
- 461 Human Variation (4)
- 462 Ecological Anthropology (4)
- 470 Language and Culture (4)
- 471 Introduction to Linguistics (4)
- 472 Linguistic Analysis (4)
- 480 Anthropological Methods and Techniques (6)
- 490 Special Topics in Anthropology (4)
- 499 Undergraduate Directed Study (1-4)

Graduate Courses

Classified graduate standing required for admission.

501 Seminar: Ethnography (4)

Prerequisites: Graduate standing in one of social sciences and consent of instructor. Selected topics in major world areas. Specific areas announced in *Schedule of Classes*. May be repeated for credit to maximum of 8 units for different areas.

510AB Seminar: Anthropological Theory and Analysis (4-4)

Advanced consideration of problems involved in application of anthropological theory to cultural data; limitations of contemporary analytical methods.

520 Seminar: Archeology (4)

Prerequisite: Anthropology 421 or 424 or 425 or consent of instructor. Archeological theory, method, and relationship of archeological materials to central problems of anthropology. May be repeated once for credit.

530 Seminar: Social Organization (4)

Prerequisite: Classified graduate standing in Anthropology or consent of instructor. Problems and theories of contemporary social anthropology. May be repeated once for credit.

560 Seminar: Physical Anthropology (4)

Prerequisite: Anthropology 461 or 462. Problems and theories of contemporary physical anthropology. May be repeated once for credit.

570 Seminar: Language and Culture (4)

Prerequisites: Sixteen units of Anthropology, including 470 or 471 or equivalent. Advanced study of concepts of language and culture; use of linguistic data and methods in anthropology; relationships between linguistic and non-linguistic behavior; linguistic models. May be repeated for credit.

571 Seminar: Linguistic Analysis (4)

Prerequisite: Anthropology 471 (English 400) or English 405 or consent of instructor. Topic selected from

following: survey of linguistic theories, analysis of historical changes, problems in phonology or morphology, field methods, ethno-linguistics. May be repeated once for credit.

580 Methods in Ethnography (5)

Prerequisite: Classified graduate standing in Anthropology or consent of instructor. Advanced principles and methods concerned with ethnographic field work; techniques of gathering, reporting, and interpreting field data related to research problems and design. May be repeated once for credit. Lecture 3 hours, laboratory and field work 6 hours.

594 Seminar: Problems in Cultural Anthropology (4)

Prerequisite: Classified graduate standing in Anthropology or consent of instructor. Problems and theories of contemporary cultural anthropology. May be repeated once for credit.

598 Graduate Directed Study (1-3)

Prerequisite: Consent of an instructor to act as sponsor. Independent study of advanced topics in field; regular conferences with sponsor. May be repeated to maximum of 6 units.

599 Graduate Thesis (1-3)

Prerequisites: Advancement to candidacy, consent of an instructor to act as sponsor, and departmental approval of topic prior to registration. Independent research resulting in a thesis. Must be repeated to total of 6 units. Graded CR/NC only.

Art

In School of Fine and Applied Arts

The Master of Arts degree program in Art is designed to improve professional competence by developing an awareness of problems in the visual arts and the abilities required for continued self-directed study. The program requires selecting and strengthening an area of specialization, with the objective of elevating ability to conceptualize on a significant level.

Admission to the Program

In addition to the University requirements for admission to graduate study, applicants must have a bachelor's degree in art from an accredited college or university, or complete Cal State L.A.'s lower and upper division art major core program or its equivalent.

Classified Graduate Standing

Approval by a graduate screening committee established by the faculty of the student's option area, and completion of any qualifying courses, are required for classified graduate standing.

Requirements for the Degree

A total of 45 units, including 33 units in art, and at least 23 units in 500-level courses is required.

Required in Art (4 units):

531 Research Methodology in Art (4)

Area of Specialization (6 units):

Select two from following:

500 Seminar: Art Education (3)

501 Seminar: Art History (3)

502 Graduate Problems in Ceramics, Metals, and Textiles (3)

503 Graduate Problems in Design (3)

504 Graduate Problems in Painting, Sculpture and Graphic Arts (3)

505 Research in Art Education (3)

544 Graduate Painting and Drawing (3)

584 Graduate Sculpture (3)

598 Graduate Directed Study (3)

Electives in Art:

Select minimum of 7 units of 500-level courses inside or outside area of specialization.

Additional Electives:

Select courses in art and other fields with approval of adviser. Include art courses to meet 33-unit requirement for degree.

Electives in Art or Other Fields (12 units):

Select 400- or 500-level courses, with approval of adviser.

Thesis or Project (6 units):

Credit earned by enrollment in Art 599.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

400 Development of Literacy in Visual Arts (4)

401B Proseminar: Critical Theories in Visual Arts (3)

403 Three-Dimensional Design (3)

405 Exploring Art Concepts and Media (4)

406 Ancient Near Eastern Art and Archeology (4)

408 Graphic Communication (3)

409 Sculpture: Clay Modeling (3)

410 Art Experiences for Exceptional Children (3)

411 Greek and Roman Art (4)

412 Advanced Ceramics (3)

413 Lettering II (3)

414 Advanced Painting and Drawing (3)

415 Foundations of Art (4)

416 Medieval Art (4)

419 Sculpture: Metal (3)

420 Methods for Teaching Elementary School Art (3)

421 Baroque Art (4)

422 Advanced Research in Craft Materials and Processes (3)

423 Product Design (3)

424 Printmaking (L) (3)

430 Art for the Young Child (4)

431 Oriental Art (4)

432 Textiles (3)

433 Color (3)

436 Renaissance Art (4)

440 Basic Craft Materials and Processes (3)

441 American Art (4)

443 Architectural Design (3)

446 Art of Latin America (4)

447 Weaving (3)

448 Exhibition Design (3)

450 Art Education Workshop: Elementary and/or Secondary (4)

451 Mannerism: High Renaissance to Baroque (4)

454 Special Topics in Art (1-4)

455 Exploring Non-Traditional Media (3)

460 Multicultural Approaches to Visual Arts (4)

461 Oceanic and North American Indian Art (4)

462 Metal Forging (3)

463 Portfolio Presentation (3)

464 Life Composition (3)

466 Nineteenth Century Art (4)

471 History of Costume I (4)

472 Enameling (3)

- 473 Costume Design (3)
- 474 Printmaking (E) (3)
- 476 Early Christian and Byzantine Art (4)
- 478 Fashion Illustration (3)
- 479 Serigraphy and Relief Printing (3)
- 480 School Arts and Crafts Workshop (5)
- 481 African Art (4)
- 482 Metal Raising (3)
- 483 Interior Design (3)
- 484 Advanced Sculpture (3)
- 486 History of Costume II (4)
- 488 Illustration (3)
- 493 Commercial Graphics (3)
- 495 Special Studies in Art (3)

Graduate Courses

Classified graduate standing required for admission.

500 Seminar: Art Education (3)

Prerequisites: Teaching experience; 20 units of art or consent of instructor. Opportunities for teachers to evaluate their experiences in light of new techniques and concepts; problems resolved through group interaction; background in subject matter increased through research and experimentation. May be repeated to maximum of 6 units.

501 Seminar: Art History (3)

Prerequisite: Six units in area of art history or consent of instructor. Research into evolution of an idea; philosophy of art form. Periodic group presentations and critical analysis. May be repeated to maximum of 6 units.

502 Graduate Problems in Ceramics, Metals, and Textiles (3)

Prerequisite: Eight units of crafts, including 6 in specific area, or consent of instructor. Individual investigation in specific area of crafts; advanced work in laboratory and research under specialist in field. May be repeated to maximum of 9 units.

503 Graduate Problems in Design (3)

Prerequisite: Six units of design or consent of instructor. Independent and interdependent library and laboratory research into problems of contemporary design permit-

ting students to pursue special interests in advanced areas. May be repeated to maximum of 9 units.

504 Graduate Problems in Painting, Sculpture and Graphic Arts (3)

Prerequisite: Eight units in painting, sculpture, and graphic arts option or consent of instructor. Independent laboratory development in given approach to painting, sculpture, and graphic arts. Development of individuality and depth in work encouraged; periodic group analysis. May be repeated to maximum of 9 units.

505 Research in Art Education (3)

Prerequisites: Art 415 or equivalent and consent of instructor. Investigation of both conceptual and procedural aspects of historical, descriptive, and experimental research relevant to practice of art education.

531 Research in Methodology in Art (4)

Research methodology and requirements related to thesis, project report, and exhibition statement in Department of Art. Required of all master's degree candidates.

544 Graduate Painting and Drawing (3)

Prerequisite: Six units of upper division painting and drawing or consent of instructor. Studio work in various media, stressing professional competence in techniques and concepts of art. May be repeated to maximum of 9 units. Activity 6 hours.

584 Graduate Sculpture (3)

Prerequisite: Art 484. Individual studio work in sculpture building upon undergraduate sculpture experiences. Periodic group presentations and critical analysis. May be repeated to maximum of 9 units. Activity 6 hours.

598 Graduate Directed Study (1-3)

Prerequisite: Consent of an instructor to act as sponsor. Independent study of advanced topics in the field; regular conferences with sponsor. Limited to 3 units per quarter. May be repeated to maximum of 9 units. Maximum combined credit for Art 499 and 598 may not exceed 12 units.

599 Thesis or Project (1-6)

Prerequisites: Advancement to candidacy, consent of an instructor to act as sponsor, and departmental approval of topic prior to registration. Independent research resulting in a thesis or project. May be repeated to maximum of 6 units. Graded CR/NC only.

Biology

In School of Letters and Science

The Master of Science degree in Biology is designed to prepare students for community college teaching, biological research, and doctoral study. The following subjects comprise a partial listing of the areas of specialization available in the department: vertebrate zoology, invertebrate zoology, physiology, cell and molecular biology, experimental embryology, vertebrate morphology, vertebrate paleontology, ecology, entomology, parasitology, genetics, histology, taxonomy, marine zoology, animal behavior, and wildlife management.

Admission to the Program

Application to both the Department of Biology and the University is required. The completed application, together with a transcript of all previous college study and GRE scores, must be received by the department prior to August 1 for admission to the Fall Quarter, November 1 for Winter Quarter, February 1 for Spring Quarter, and April 1 for Summer Quarter. Applicants desiring a teaching assistantship must also submit two letters of recommendation by the same deadline.

Applicants are expected to possess a bachelor's degree in an area of Biology equivalent to that offered at Cal State L.A., or equivalent preparation. In addition applicants must have a 2.75 g.p.a. in the last 90 quarter units and scores of 450 on the Verbal and Quantitative Aptitude Tests of the GRE.

Students admitted conditionally must achieve a 3.0 grade point average in their first quarter, and have achieved classified graduate standing by the end of their second quarter of graduate study.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, and a comprehensive examination or thesis/project, is required.

Required Courses (23 units):

Select 500-level courses in an area of concentration, with approval of adviser. Students electing the comprehensive examination may include a maximum of 6 units of Biology 598. Students electing the thesis or project must include a minimum of 3 courses other than Biology 597 and 599.

Electives (22 units):

Select 400- or 500-level courses in biology or related fields, with approval of adviser.

Comprehensive Exam/Thesis or Project (0, 9 units):

Comprehensive Examination

or

599 Thesis or Project (9)

Students selecting the comprehensive examination should expect to take it in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Students who submit theses must pass a final oral examination administered by the thesis committee and the Department of Biology. An oral examination is not required for students electing the comprehensive examination.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

- 401 Microtechniques (4)
- 402 Electron Microscopy (4)
- 403 Plant Tissue Culture (4)
- 412 Cytology (4)
- 415 General Genetics (4)
- 416 Molecular Genetics (4)
- 418 Heredity and Evolution (4)
- 423 Comparative Anatomy (5)
- 424 General Embryology (4)
- 425 Plant Anatomy (4)
- 426 Algae (4)
- 427 Fungi (4)
- 428 Morphology of Vascular Plants (4)
- 429 Animal Histology (5)
- 430 Plant Physiology I (4)
- 431 Plant Physiology II (4)
- 433 Animal Physiology I (4)
- 434 Animal Physiology II (4)
- 437 Advanced Animal Physiology (4)
- 438 Comparative Physiology (5)
- 440 Taxonomy of Angiosperms (4)
- 442 Principles of Animal Taxonomy (2)
- 451 Ornithology (4)
- 452 Ichthyology (4)
- 453 Herpetology (4)
- 455 Mammalogy (4)
- 456 Vertebrate Paleontology (4)
- 457AB Marine Invertebrate Zoology I,II (4-4)
- 458 General Entomology (4)
- 460 General Ecology (4)
- 461 Fresh-water and Marine Botany (4)
- 462 Plant Ecology (4)
- 463 Plant Geography (4)
- 464 Fresh-water Biology (4)
- 470 Conservation of Wildlife (4)
- 471 Population Ecology (4)
- 472 Marine Zoology (4)
- 473 Applied Entomology (4)
- 475 Animal Behavior (3)

- 480 Parasitic Protozoa (4)
- 481 Parasitic Helminths (4)
- 482 Medical Entomology (4)

Graduate Courses

Classified graduate standing required for admission.

501 Seminar: Development of Biological Concepts (4)

Impact of great concepts in biological science on human thought and activities, and on present day understanding.

515 Seminar: Genetics (3)

Prerequisite: Biology 415 or consent of instructor. Recent developments in various fields of genetics. May be repeated once for credit as subject matter changes.

523 Topics in Vertebrate Morphology (4)

Prerequisite: Biology 423 or 424. Advanced study in comparative morphology, with emphasis on evolution and development of vertebrate skull, brain and neurosensory organs. May be repeated for credit. Lecture 2 hours, laboratory 6 hours.

524 Seminar: Embryology (3)

Prerequisites: Biology 330 and 424, Chemistry 208ABC, and consent of instructor. Chemical background of fertilization and embryonic development, with emphasis on problems of intermediary metabolism and cellular differentiation. May be repeated once for credit.

530 Seminar: Photobiology (3)

Prerequisites: Biology 330 and 430, 433 or 434; Chemistry 208C; consent of instructor. Problems associated with the relation of various phenomena in living organisms to photoperiodic, lunar and seasonal rhythms.

532 Physiology of Plant Growth and Development (3)

Prerequisites: Biology 330, Chemistry 208ABC, and one quarter of systems physiology. Regulatory mechanisms in growth and senescence; emphasis on effects and mode of action of hormones at cellular level.

536 Seminar: Neurology (3)

Prerequisites: Biology 330 and Chemistry 208C. Consideration of recent developments in neurochemistry, electrical phenomena, and motor and sensory functions. May be repeated for credit. Physiological psychology students may enroll with special permission.

537 Seminar: Endocrinology (3)

Prerequisites: Biology 437 and Chemistry 208ABC or consent of instructor. Discussion of current topics and trends in endocrine physiology. May be repeated for credit.

538 Seminar: Environmental Physiology (3)

Prerequisite: A course in animal systems physiology; Biology 438 recommended. Mechanisms and specializations of animals as related to their environment. May be repeated to maximum of 6 units as subject matter changes.

539 Seminar: Cell Biology (3)

Prerequisites: Biology 330 and Chemistry 208C or 431C. Topical course major functions considered primarily from standpoint of causative mechanisms and control mechanisms. May be repeated to maximum of 6 units.

540 Seminar: Biological Systematics (3)

Prerequisites: Genetics, statistics, and a systematics or classification course in either Botany or Zoology. Fundamental concepts and problems in definition and recognition of species and higher taxa, and the special experimental or biometric techniques used.

550 Topics in Invertebrate Zoology (2)

Prerequisites: Biology 457AB. Group or individual work on major groups of invertebrates; emphasis on classification, comparative morphology, phylogeny and local faunal representatives. May be repeated for credit. Lecture 1 hour, laboratory 3 hours.

560 Topics in Animal Ecology (3)

Prerequisite: Biology 460. Advanced studies in ecological relationships of animals, with emphasis on synecology. May be repeated once for credit. Lecture 2 hours, laboratory/field work 3 hours.

561 Applied Mycology (4)

Prerequisites: Biology 427 and Chemistry 208AB. Role of fungi in soil enrichment, fermentation, antibiotic production, degradation of household and commercial commodities, decomposition of sewage, and disease. Lecture 2 hours, laboratory 6 hours.

562 Advanced Topics in Plant Ecology (3)

Prerequisite: Biology 462. Analysis of selected plant communities to determine structure, pattern, and interrelationships; discussion of current theories, problems and methods of vegetational sampling, analysis, and synthesis. Lecture 2 hours, laboratory and/or field work 3 hours.

575 Seminar: Animal Behavior (3)

Prerequisite: Biology 475 or Psychology 408. Current topics in animal behavior, with emphasis on origin and ecological significance of behavioral patterns.

597 Graduate Research (1-6)

Prerequisite: Approval of program committee. Conducting research toward master's degree. May be repeated to maximum of 6 units. Graded CR/NC only.

598 Graduate Directed Study (1-4)

Prerequisites: Consent of instructor to act as sponsor and approval of program by departmental Graduate Studies Committee. Directed study of advanced topics in Biology. Assigned readings, conferences, lectures, and seminars. Graded CR/NC only.

599 Thesis or Project (1-9)

Prerequisites: Advancement to candidacy, consent of instructor to act as sponsor, and departmental approval of topic prior to registration. Independent research resulting in thesis or project. May be repeated to maximum of 9 units. Graded CR/NC only.

Business

The major objective of the School of Business and Economics is to equip men and women with the intellectual tools needed to assume responsible positions in business, industry, education, government, and the managerial aspects of social service organizations. The preparation includes both a basic understanding of the entire social and physical environment of the urban community, of which Business and Economics are an integral part, and a substantial background in the underlying fields of knowledge dealing specifically with Business and Economics.

Accreditation

The School of Business and Economics is nationally accredited on both the graduate and undergraduate levels by the American Assembly of Collegiate Schools of Business.

Degrees Offered

The School offers programs leading to master's degrees in four fields.

The Master of Science degree in Business Administration, primarily for holders of a bachelor's degree in Business, provides options designed to meet specific professional objectives in (a) Accounting, (b) Business Economics, (c) Business Education, (d) Finance, (e) Management, and (f) Marketing.

The Master of Business Administration (M.B.A.) degree offers professional preparation for management positions in business and industry. It is designed for holders of baccalaureate degrees in other academic fields as well as in Business.

The Master of Arts degree in Business Education has been established to meet the needs of business teachers who wish to extend their formal education for teaching in secondary schools, community colleges, or private business schools.

The Master of Arts degree in Economics provides the opportunity for advanced study of economic theory and research, as preparation for careers as teachers and economists.

In addition, the School offers jointly with the School of Fine and Applied Arts, the interdisciplinary *Master of Science degree in Health Care Management*, which is designed to prepare students for department head positions in metropolitan area health care facilities.

Admission to Master's Programs

The school admits graduate students in conditional classified standing and classifies them when eligible.

Conditionally classified students are permitted to pursue post-graduate course work, but are not permitted to register in courses open only to classified graduate students. No 400- or 500-level course completed while the student is in conditional classified standing may be applied toward a master's degree.

Conditionally classified graduate students seeking classified standing must follow, in their first quarter of residence, the procedures obtainable from the advisement center of the School of Business and Economics.

Classified Graduate Standing

Classified graduate students are those officially admitted to master's degree programs. Entering students expecting to achieve classified graduate

standing during their first quarter in residency must, in the quarter immediately preceding that of entrance, supply proof (in person) of eligibility. The advisement center of the School of Business and Economics must be contacted for counseling prior to registration.

Test scores and grade point averages required for admission to classified graduate standing vary for each degree program and are described under each.

Completion of the following basic business core subjects are required for admission to classified graduate standing for the M.S. in Business Administration (33 units) and the M.B.A. (37 units).

In Mathematics:

240AB Introductory Mathematical Analysis for Business (4-2)

In Economics:

310 Economics of the Business Firm (4)

In Business:

202 Survey of Accounting (4)

205 Foundations of Business Law (4)

300 Managerial Accounting (4)

Required for M.B.A. only.

303 Business Finance (4)

304 Principles of Marketing (4)

306 Introduction to Management Science (4)

309 Applied Business and Economic Statistics II (3)

Suitable credit for these courses will be given for any equivalent courses taken either as an undergraduate or graduate prior to matriculation at Cal State L.A., provided the student supplies acceptable proof of course equivalency. All courses taken subsequent to matriculation must be taken at Cal State L.A. A 3.0 B average is required in all basic business core courses taken subsequent to the baccalaureate degree.

Master of Science Degree in Business Administration

Only classified graduate students with approved Master of Science in Business Administration programs and entering students with written permission, obtained during the preceding quarter from the Coordinator of Graduate Programs in the School of Business and Economics, may pursue the program.

Admission to the Program

Admission to classified graduate standing requires the following: (1) A score of 450 or above on the Graduate Management Admissions Test; foreign students must pass the Test of English as a Foreign Language with a score of 550 or above. (2) A g.p.a. of 2.75 or above in 90 quarter units of undergraduate work; 3.0 g.p.a. for foreign students.

Requirements for the Degree

A total of 45 units is required, of which at least 23 units must be 500-level.

Required Core in Business (16–19 units):

501 Administrative Practices and Human Relations (4)

502 Economic Analysis and Business Operations (4)

503 Quantitative Approach to Managerial Decisions (4)

598 Graduate Directed Study (4-7)

Thesis (5 units):

599AB Thesis (2, 3)

Option (21–24 units):

Select one of the following options: elective courses are determined, in conference with graduate adviser, to meet professional objectives.

ACCOUNTING OPTION

Courses in Business (9 units):

520 Seminar in Accounting Theory (3)

521 Seminar in Accounting Analysis (3)

522 Seminar in Income Tax Problems and Procedures (3)

or

523 Seminar in Public Accounting (3)

Electives (12–15 units):

At least one elective must be a 500-level seminar.

BUSINESS ECONOMICS OPTION

Required in Economics (12 units):

510 Seminar in Advanced Microeconomic Theory I (3)

520 Seminar in National Income and Employment Theory (3)

521 Seminar in Monetary Theory and Policy (3)

598 Graduate Directed Study (1-1-1)

Students in the Business Economics option enrolling in these seminars should request registration cards providing 3 units of credit for each. They also must enroll in 1 unit of Economics 598 concurrently.

Electives (9–12 units):

At least one elective must be a 500-level seminar. If Business 409 has not been taken for undergraduate credit, it must be included in electives.

BUSINESS EDUCATION OPTION

Required in Business (9 units):

510 Seminar in Business Teaching (3)

511 Seminar in Administration and Supervision in Business Education (3)

512 Seminar in Current Problems and Issues in Business Education (3)

Electives (12–15 units):

At least one elective must be a 500-level seminar.

FINANCE OPTION

Required in Business (9 units):

530 Business Finance Seminar (3)

531 Financial Institutions Seminar (3)

532 Estate Planning Seminar (3)

Electives (12–15 units):

At least one elective must be a 500-level seminar.

MANAGEMENT OPTION

Required in Business (9 units):

560 Seminar in Planning (3)

561 Seminar in Organizing (3)

562 Seminar in Control (3)

Electives (12–15 units):

At least one elective must be a 500-level seminar.

MARKETING OPTION

Required in Business (9 units):

541 Seminar in Marketing Management Controls (3)

542 Seminar in Marketing Problems (3)

543 Seminar in International Marketing (3)

Electives (12–15 units):

At least one elective must be a 500-level seminar.

Master of Business Administration Degree

Only classified graduate students with approved Master of Business Administration programs and entering students with written permission, obtained during the preceding quarter from the

School's Coordinator of Graduate Programs, may pursue this program.

Admission to the Program

Admission to classified graduate standing requires the following: (1) A score of 450 or above on the Graduate Management Admissions Test; foreign students must pass the Test of English as a Foreign Language with a score of 550 or above. (2) A g.p.a. of 2.75 or above in 90 quarter units of undergraduate work; 3.0 g.p.a. for foreign students.

Requirements for the Degree

A total of 52 units is required, with a four-part comprehensive examination to be taken after advancement to candidacy and completion of the M.B.A. core program. At least 36 units must be 500-level courses.

Required Core in Business (24 units):

- 501 Administrative Practices and Human Relations (4)
- 502 Economic Analysis and Business Operations (4)
- 503 Quantitative Approach to Managerial Decisions (4)
- 520 Seminar in Accounting Theory (3)
- 531 Financial Institutions Seminar (3)
- 542 Seminar in Marketing Problems (3)
- 598 Graduate Directed Study (3)

Additional Courses (28 units):

Select 400- or 500-level courses with approval of adviser. Maximum of 16 units may be taken in one field, chosen from Accounting, Finance, Management, Marketing, or Business Economics. Minimum of 12 units must be taken at the 500 level.

Comprehensive Examination:

Students should expect to take four two-hour examinations over two days, covering four fields of the core program, including the major.

Master of Arts Degree in Business Education

Admission to the Program

This program is designed to meet the needs of Business Education teachers primarily at the secondary school and community college levels.

Classified Graduate Standing

Conditionally classified students are permitted to pursue post-graduate course work, but no 400- or 500-level course completed while in conditionally classified standing may be applied toward a master's degree program.

Admission to classified graduate standing requires the following:

- (a) An upper division g.p.a. of at least 2.75 or an average g.p.a. of at least 2.5 plus an average grade of B (3.0) in 14 quarter units of pre-selected upper division qualifying courses taken at Cal State L.A. beyond the bachelor's degree.
- (b) The equivalent of the bachelor's degree in

Economics, Business Education, or Business Administration at Cal State L.A., or a bachelor's degree in a field other than these three, and completion of a set of prerequisite courses with an average grade of B.

(c) A minimum score of 400 on either the Verbal or the Quantitative sections of the Aptitude Test of the Graduate Record Examination or a minimum score of 450 on the Graduate Management Admissions Test (formerly ATGSB).

(d) A grade point average of at least B on all courses taken subsequent to baccalaureate degree.

Requirements for the Degree

A total of 45 units is required, of which 23 must be 500-level.

Required Courses (20 units):

- 510 Seminar in Business Teaching (3)
- 511 Seminar in Administration and Supervision in Business Education (3)
- 512 Seminar in Current Problems and Issues in Business Education (3)
- 513 Seminar: Research in Business Education (3)
- 514 Seminar: Evaluation of Student Performance in Business Education (3)
- 598 Graduate Directed Study (5)

Electives (25 units):

Select from 400- or 500-level courses with approval of adviser; include 9-12 units in Business or Economics, 6-8 units in Education, and a 3-unit methods course in Business Education. If Business 410AB or its equivalent has not been taken previously, it should be included in the program.

Oral Comprehensive Examination

Students selecting the comprehensive examination should expect to take it in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Courses in Business

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

- 401 Administrative Business Reports (4)
- 409 Advanced Applied Business and Economic Statistics (4)
- 410AB Problems in Business Education I,II (3-3)
- 412 Office Systems and Procedures (3)
- 414 Records Management (4)
- 420AB Advanced Accounting I,II (4-4)
- 421 Tax Accounting II (4)
- 422AB Cost Accounting I,II (4-4)
- 423 Financial Accounting Theory (4)
- 424AB Auditing I,II (4-4)
- 426 Problems in Accounting Theory and Practice (6)
- 427 Governmental and Institutional Accounting (4)
- 430 Case Study in Commercial Bank Administration and Policies (4)
- 432 Real Estate Management (4)
- 433 Budgeting (4)
- 434 Financial Management (4)

- 435 Life, Health and Group Insurance (4)
- 436 Business Risk Management (4)
- 437 Securities Analysis (4)
- 438AB Real Estate Valuation I,II (4-4)
- 439 Real Estate Finance (4)
- 440 Advanced Advertising (4)
- 441 Industrial Marketing (4)
- 443 Marketing in a New Business (4)
- 445 Public Relations Methods for Business (4)
- 446 Marketing Research Problems (4)
- 447 International Marketing Management (4)
- 448 Seminar in Modern Transportation (4)
- 449 Physical Distribution Management (4)
- 450 Seminar in Transportation Regulation (4)
- 454 Special Topics in Business (4)
- 460 Case Studies in Business Management (4)
- 461 Management Theory and Practice (4)
- 462 Comparative Management (4)
- 463 Motion and Time Study (4)
- 464 Production and Material Control (4)
- 465 Purchasing Management (4)
- 467 Quality Control (4)
- 468 Small Business Management (4)
- 469 Experimental Design and Analysis (4)
- 472 Labor Relations and Collective Bargaining (4)
- 473 Personnel Management (4)
- 474 Wage and Salary Administration (4)
- 475 Cases in Personnel Management (4)
- 477 Business Policy (4)
- 479 Seminar: Business in Its Social Setting (4)
- 480 Advanced Business Law (4)
- 481 Introduction to Business Information Systems (4)
- 482 Business Information Systems Design (4)
- 483 Advanced COBOL Programming (4)
- 484 On-line Systems (4)
- 485 Case Studies in Profit Sharing and Pension Plans (4)
- 486 Managing Information Systems Support (4)
- 487 Introduction to Strategic Information Systems (4)
- 488 Advanced Information Systems Design (4)
- 490 Survey of Data Processing (4)
- 491 Sampling Theory and Techniques in Research (4)
- 496AB Operations Research I,II (4-4)

Graduate Courses

Classified graduate standing and approval by the School of Business and Economics Advisement Center are required for admission to all 500-level courses.

501 Administrative Practices and Human Relations (4)

Case studies of human relations problems confronting business administrators; concepts used to solve problems confronting individuals in leading people or participating in group actions.

502 Economic Analysis and Business Operations (4)

Tools, concepts, and factual data of the economist in solving specific business problems; case method applications of principles, analytical tools, and sources of economic information to practical business situations.

503 Quantitative Approach to Managerial Decisions (4)

Use of quantitative information provided from accounting and statistical sources in arriving at solutions to complex business problems.

510 Seminar: Business Teaching (3)

Prerequisite: Classified standing for M.A. in Business Education. Problems of classroom teacher in Business Education subjects; students present teaching problems they are facing, and through library research, projects, and class discussion, suggest possible solutions.

511 Seminar: Administration and Supervision in Business Education (3)

Prerequisite: Classified standing for M.A. in Business Education. Problems of administering a business education department, working with the business community, supervision, business internship programs, as well as other supervisory and administrative problems faced by members of class.

512 Seminar: Current Problems and Issues in Business Education (3)

Prerequisites: Classified standing for M.A. in Business Education; Education 500. Application of research techniques and results to business education; exploration of areas for further research.

513 Seminar: Research in Business Education (3)

Prerequisite: Business 512. Selection of specific area of concentration in business education, thorough analysis of the research, and the preparation of research study.

514 Seminar: Evaluation of Student Performance in Business Education (3)

Principles of testing and evaluation; prognosis, aptitude, and achievement tests for specialized business careers; interpretation of business education tests; grading and evaluation in business subjects; standardized tests and their construction.

520 Seminar: Management Accounting Theory (3)

Prerequisite: Business 300. Advanced accounting theory as applied to modern business practice; background and place of accounting in society and the economy; current development in accounting theory.

521 Seminar: Financial Accounting Theory (3)

Advanced analytical concepts implicit in contemporary accounting practice, current developments in accounting techniques, specific applications to major aspects of financial statements.

522 Seminar: Advanced Income Tax Problems and Procedures (3)

Prerequisite: Business 421. Methodology of researching complex tax problems of individuals, partnerships, corporations, estates, and trusts; taxation of multinational operations; tax planning; practice procedures before IRS and other tax and judicial authorities.

523 Seminar: Public Accounting (3)

Historical development of professions, audit function in relation to ethical and legal considerations, trends in new services for clients, the CPA firm, multinational practice, signposts of the future.

527 Seminar: Business Information Systems (3)

Analysis, design, management, and use of a business information system, concentrating on participation of top and middle managers in these functions.

528 Seminar: Current Problems in Business Information Systems (3)

Prerequisites: Twelve units of 400-and/or 500-level courses in business information systems, and classified standing for M.B.A. or M.S. in Business Administration. Survey of latest research projects in business information system; application of research techniques and results to specific problem.

530 Business Finance Seminar (3)

Analysis of acquisition and administration of assets by the business corporation, analysis of interrelationships between business financial decisions and national economy, and development of theories of financial management.

531 Financial Institutions Seminar (3)

Role of financial institutions in United States; financial management of the various types of financial institutions against a background of national income, national policies, and flow of funds.

532 Estate Planning Seminar (3)

Advanced planning for individual financial management; consideration given to legal, financial, and taxation problems, including insurance, investments, trusts, real estate, wills, and related laws.

533 International Finance Seminar (3)

An analysis of institutions, instruments, and procedures used in financing exports and imports, international investments, and multinational business operations.

540 Seminar: Marketing in Action (3)

Prerequisites: Classified standing for M.B.A. or M.S. in Business Administration. Role of marketing functions in changing environment; adaptive marketing behavior in firms seeking advantage in the marketplace.

541 Seminar: Marketing Systems (3)

Components of relevant systems including competitive environment, customer demand, relative costs, channel composition, which contribute to an effective marketing system.

542 Seminar: Marketing Management (3)

Analysis of management of the enterprise, operating under conditions of uncertainty and designed to distribute want satisfying goods and services.

543 Seminar: International Marketing (3)

Planning and implementing international marketing programs including those of multinational corporations; micro and macro marketing implications of economic development; consumer behavior, market research and strategy in other cultures.

560 Seminar: Planning (3)

Development of a business management philosophy, emphasizing business plans and planning, business objectives, ethical standards, business policy, and long-range planning. Case materials, searching analysis of company practices.

561 Seminar: Organizing (3)

Continued development of a management philosophy, with emphasis upon process of organizing, allocation of responsibility and authority, formation and behavior of industrial work groups. Critical analysis through case materials.

562 Seminar: Control (3)

Continued development of a management philosophy with emphasis upon procedure analysis automation, operations research, control of operations, and morale. Case materials, searching analysis of company operations.

563 Organization and Management of Health Institutions (4)

Practical issues in administering health programs and services; administrative responsibility from planning through implementation.

564 Labor Relations Aspects of Health Care Delivery (2)

Prerequisite: Nursing 540. Formal and informal relationships between health care facilities management and labor organizations; development of unions in health care industry, changing role of management; professional organizations; collective bargaining.

598 Graduate Directed Study (1)

Investigation of an approved project leading to written report; project selected in conference with seminar professor, and arrangements made for regular meetings during quarter. May be repeated for credit.

599A Thesis (1-2)

Prerequisites: Written approval of graduate adviser. For M.S. in Business Administration, completion of at least one of Business 501,502, or 503, and concurrent registration in at least one of the remaining two courses. Formal course in research methodology conducted at option of individual departments. Prior to completion, students will have: (1) completed a tentative outline of thesis, (2) petitioned graduate adviser for appointment of a thesis committee, and (3) submitted tentative outline to thesis committee. Graded CR/NC only.

599B Thesis (1-3)

Prerequisites: Business 599A and written approval of chairman of thesis committee. Completion of thesis under direct supervision of thesis committee. Graded CR/NC only.



Chemistry

In School of Letters and Science

The objectives of the Master of Science degree program in Chemistry, as well as the option in Biochemistry, are to prepare students for employment in industrial research, teaching positions in community colleges, or study toward the Ph.D. degree in Chemistry.

Admission to the Program

A bachelor's degree in Chemistry or Biochemistry from an accredited college or university, or a bachelor's degree in a related field with a strong background in chemistry, is required for admission. Applicants interested in the Biochemistry option should have a preparation equivalent to that of the Cal State L.A. bachelor's degree in Biochemistry, which includes, among other requirements, 10 units of introductory biology, 8 units of microbiology and 11 units of upper division biology.

All applicants are required to have a 2.75 g.p.a. in the last 90 quarter units.

Applications for any quarter must be submitted early in the previous quarter. Students must apply to both the Chemistry Department and the University Admissions Office.

Placement Examinations

All new graduate students must take a placement examination administered by the Department of Chemistry before registration. The examination will cover Physical, Analytical, Inorganic and Organic Chemistry. For those specializing in Biochemistry, examinations in Biochemistry and Biology will replace those in Analytical and Inorganic Chemistry. The examination is given at a time and place announced by the Department of Chemistry.

Students entering the program must take all placement examinations appropriate to their area. If students do not take an examination, it is presumed that they are not proficient in the particular area, and will be required to take the complete undergraduate sequence for this area as corequisite or qualifying courses. Students who do not take or do not pass an area examination may, upon approval by the principal graduate adviser, be given a second opportunity to take it the next time it is given.

Requirements for the Degree

Both the program in Chemistry and the option in Biochemistry consist of required courses, electives, research (597) and thesis (599), with a minimum of 26 units in 500-level courses, including 597 and 599. Of the remaining 19 units, eight

must be outside the student's area of specialization in Chemistry.

The student's program is designed with the assistance of a faculty adviser and the student's thesis committee.

Additional Requirements

All candidates must meet the following requirements:

1. Submit a thesis, which must be approved by the Chemistry Department as a part of the program.
2. Pass a final oral examination, primarily on the thesis, administered by the Chemistry Department.
3. Possess a reading knowledge of chemistry in a foreign language or take at least four quarter units in an auxiliary coordinated program of study in computer analysis, chemical education, or other courses as recommended by the student's graduate advisory committee. Courses taken will be in addition to the minimum required for the degree.

Language proficiency may be demonstrated by passing a foreign language proficiency examination in the language selected as offered in the Department of Foreign Languages and Literatures, and with approval of that department.

The language examination normally will be taken in German or Russian, although other languages would be accepted if, in the opinion of the advisory committee, a reading knowledge of the alternate language proposed would be of value to students in their professional career. Foreign students whose native language is not English may petition the Graduate Studies Committee for approval of English as the foreign language provided it was not the principal language of instruction in their primary or secondary education.

4. Students specializing in Biochemistry will not receive graduate credit for Chemistry 431ABC or 432AB and are allowed 14 units of electives outside the field of chemistry.

Students must select the required courses for Chemistry or for the Biochemistry option, as appropriate; however, students who have previously taken the equivalent of any of these courses will not be required to repeat them.

Master of Science Degree in Chemistry

The 45-unit program for the degree in Chemistry is as follows:

Required in Chemistry (15 units):

- 420 Advanced Organic Chemistry I (4)
- 501 Quantum Chemistry (4)
- 504 Advanced Inorganic Chemistry (4)
- 580 Graduate Seminar in Chemistry (1-1-1)

Electives in Chemistry (18-20 units):

Select from following with approval of adviser; include enough 500-level courses to meet department minimum of 26 units.

- 413 Intermediate Physical Chemistry (4)
- 414 Chemical Thermodynamics (4)
- 415 Chemical Kinetics (4)
- 419 Inorganic Chemistry Laboratory (3)
- 422 Organic Analysis (4)
- 426 Advanced Synthetic Organic Chemistry (5)
- 431AB Biochemistry (3-3-3)
- 432AB Biochemistry Laboratory (2-2)
- 433 Clinical Biochemistry (3)
- 454 Special Topics in Advanced Chemistry (1-4)
- 480 History of Chemistry (4)
- 503 Seminar: Biochemistry (3)
- 505 Special Topics in Graduate Chemistry (4)
- 508 Seminar: Natural Products Chemistry (4)
- 520 Advanced Organic Chemistry II (4)
- 534AB Seminar: Clinical Biochemistry (3-3)
- 590 Advanced Laboratory (1-4)
- 598 Graduate Directed Study (1-4)

Electives Outside Chemistry (0-9 units):

Select with approval of adviser.

Research and Thesis (10-12 units):

- 597 Graduate Research (6-8)
- and
- 599 Thesis (4)

Combined units of Chemistry 590, 597, 598, and 599 may not exceed 15 units. Students must comply with school and departmental requirements.

Option in Biochemistry

The 45-unit program for the option is as follows:

Required in Chemistry (12 units):

- 503 Seminar: Biochemistry (3)

Must be repeated to total of 9 units.

- 580 Graduate Seminar in Chemistry (1-1-1)

Electives in Chemistry (7-23 units):

Select from following, with approval of adviser; include sufficient 500-level courses to meet department minimum of 26 units.

- 413 Intermediate Physical Chemistry (4)
- 414 Chemical Thermodynamics (4)
- 415 Chemical Kinetics (4)
- 418 Inorganic Chemistry (4)
- 419 Inorganic Chemistry Laboratory (3)
- 420 Advanced Organic Chemistry I (4)
- 422 Organic Analysis (4)
- 426 Advanced Synthetic Organic Chemistry (5)
- 433 Clinical Biochemistry (3)
- 454 Special Topics in Advanced Chemistry (1-4)

- 462 Analytical Chemistry (6)
- 480 History of Chemistry (4)
- 501 Quantum Chemistry (4)
- 504 Advanced Inorganic Chemistry (4)
- 505 Special Topics in Graduate Chemistry (4)
- 508 Seminar: Natural Products Chemistry (4)
- 520 Advanced Organic Chemistry II (4)
- 534AB Seminar: Clinical Biochemistry (3-3)
- 590 Advanced Laboratory (1-4)
- 598 Graduate Directed Study (1-4)

Electives Outside Chemistry (0-14 units):

Select with approval of adviser.

Research and Thesis (10-12 units):

- 597 Graduate Research (6-8)
- and
- 599 Thesis (4)

Combined units of Chemistry 590, 597, 598, and 599 may not exceed 15. Students must comply with school and departmental requirements.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

- 413 Intermediate Physical Chemistry (4)
- 414 Chemical Thermodynamics (4)
- 415 Chemical Kinetics (4)
- 418 Inorganic Chemistry (4)
- 419 Inorganic Chemistry Laboratory (3)
- 420 Advanced Organic Chemistry I (4)
- 422 Organic Analysis (4)
- 426 Advanced Synthetic Organic Chemistry (5)
- 431ABC Biochemistry (3-3-3)
- 432AB Biochemistry Laboratory (2-2)
- 433 Clinical Biochemistry (3)
- 454 Special Topics in Advanced Chemistry (1-4)
- 462 Analytical Chemistry (6)
- 480 History of Chemistry (4)

Graduate Courses

Classified graduate standing required for admission.

501 Quantum Chemistry (4)

Prerequisite: Mathematics 302 or 401 (may be taken concurrently). Quantum chemistry, including discussion of molecular, orbital, and valence bond theories and their applications to chemistry.

503 Seminar: Biochemistry (3)

Prerequisites: Chemistry 431ABC and 432AB or consent of instructor. Recent concepts of enzyme systems, biological oxidation, intermediate metabolism, biosynthesis of macromolecules, biochemical genetics, metabolic regulation, and related phenomena. May be repeated as subject matter changes to maximum of 12 units.

504 Advanced Inorganic Chemistry (4)

Prerequisite: Chemistry 418. Selected topics on structure and mechanism in inorganic chemistry; discussion of modern theories applied to inorganic chemistry.

505 Special Topics in Graduate Chemistry (4)

Prerequisite: Consent of instructor. Specialized topics in chemistry given at an advanced level. May be repeated once for credit.

508 Seminar: Natural Products Chemistry (4)

Prerequisite: Chemistry 420. Synthesis, biogenesis, structural elucidation, and reaction mechanisms of natural products.

520 Advanced Organic Chemistry (4)

Prerequisite: Chemistry 420. Modern theories of organic chemistry.

534AB Seminar: Clinical Biochemistry (3-3)

Prerequisites: Chemistry 431ABC, 432AB and 433 or consent of instructor. Recent developments in clinical biochemistry, with emphasis on abnormal protein, lipid and carbohydrate metabolism, hormone assay, and endocrine function.

580 Graduate Seminar in Chemistry (1-1-1)

Attendance at regular departmental seminar program; participation in seminar training program with course instructor; presentation of a satisfactory departmental seminar. May be repeated to maximum of 3 units. Graded CR/NC only.

590 Advanced Laboratory (1-2)

Prerequisites: Chemistry 302B and 412B or 432B or 433. Introduction to advanced laboratory techniques involving individual student projects. May be repeated four times to maximum of 6 units; maximum of 4 units may be applied to M.S. degree.

597 Graduate Research (1-4)

Prerequisite: Approval of departmental adviser. Research leading toward M.S. degree. Graduate students must earn a minimum of 6 and a maximum of 8 units. Graded CR/NC only.

598 Graduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Independent study of advanced topics in the field, regular conferences with sponsor. Student's progress determined by oral and/or written reports. May be repeated for credit; combined total units for 597 and 598 may not exceed 13.

599 Thesis (1-4)

Prerequisites: Advancement to candidacy, consent of an instructor to act as sponsor, and departmental approval of topic prior to registration. Independent research resulting in thesis and oral defense thereof. May be repeated to maximum of 4 units. Graded CR/NC only.

Criminal Justice

In School of Fine and Applied Arts

Two graduate programs are offered by the Department of Criminal Justice. The Master of Science degree in Criminalistics emphasizes preparation for specialization in the scientific fields of law enforcement. The Master of Science degree in Criminal Justice prepares for administrative services in law enforcement.

Master of Science Degree in Criminalistics

The Criminalistics program is built on undergraduate preparation in chemistry and provides technical training in crime laboratory skills, with special emphasis on development of skilled experts able to function in a variety of scientific fields.

Admission to the Program

In addition to the University requirements for admission to graduate study, applicants must have a bachelor's degree in chemistry from an accredited college or university, or a bachelor's degree in a related scientific field with a minimum of 36 quarter units in chemistry, including 12-15 units in organic chemistry. Applicants also must have a minimum total score of 800 on the Graduate Record Examination taken prior to admission and a g.p.a. of 3.0 (B) B in the last 90 quarter units of college work attempted.

The following courses in Criminal Justice or their equivalents must have been taken prior to admission to graduate study, or be taken concurrently. These courses are not counted toward the 45 units required for the degree.

- 126 Concepts of Criminal Law (4)
- 221 Legal Aspects of Evidence (4)
- 235 Elements of Investigation (4)
- 362 Investigative Photography (4)
- 363 Interviewing Techniques (4)
- 461 Physical Evidence (4)

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required.

Required in Criminal Justice (26-30 units):

- 551-53 Advanced Criminalistics I,II,III (3-3-3)
- 554 Identification of Modern Drugs (4)
- 555 Questioned Document Analysis (4)
- 556 Seminar: Special Problems in Criminalistics (4)
- 557 Legal Medicine in Criminalistics (4)
- 598 Graduate Directed Study (1-5)

Electives in Criminal Justice (3-7 units):

Select with approval of adviser.

Electives in Related Fields (12 units):

Select with approval of adviser.

Master of Science Degree in Criminal Justice

The Criminal Justice program provides advanced study in theory and application of methods in administration and management of criminal justice agencies, with emphasis on those whose function is law enforcement.

Admission to the Program

In addition to the University requirements for admission to graduate study, applicants must have a minimum total score of 800 on the Graduate Record Examination taken prior to admission, possess a g.p.a. of 3.0 (B) in the last 90 quarter units of college work attempted.

A bachelor's degree from an accredited college or university, with acceptable undergraduate preparation in police administration or criminal justice, is required for admission.

Undergraduate preparation must include the following courses or equivalents:

In Criminal Justice:

- 126 Concepts of Criminal Law (4)
- 221 Legal Aspects of Evidence (4)
- 401 Innovative Management Systems (4)
- 404 Unusual Occurrence Management (4)
- 428 Contemporary Criminal Procedures (4)
- 437 Traffic Management Systems (4)

In Political Science:

- 305 American Federal Government (4)
- 403 State and Local Government (4)

In Sociology:

- 480 Criminology (4)

In Educational Foundations:

- 452 Statistics in Education (4)
- or

In Sociology:

- 210A Elementary Statistics (3)

Application to both the Department of Criminal Justice and to the University is required, on forms available from the department's graduate admissions committee.

Transcripts from all colleges and universities attended and Graduate Record examination scores must be submitted with the application to the department's graduate admissions committee at the same time that application is filed with the University's Admissions Office.

Applicants who have not completed an undergraduate major in a criminal justice area, or whose g.p.a. is below that required for regular admission into the program, may be admitted under certain circumstances on conditional status, at the discretion of the departmental graduate admissions committee.

In order to apply any courses toward the master's degree, students must request assignment of an adviser and file an application for classified standing, both to be done during the first quarter of attendance.

Comprehensive examinations in the fields of Criminal Justice and Political Science are required for the master's degree. However, a thesis (4 units) may be undertaken in lieu of the comprehensive examinations, subject to approval by the faculty adviser concerned.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required.

Required in Criminal Justice (16 units):

- 501 Seminar: Administration of Justice (4)
- 506 Seminar: Comparative Law Enforcement Administration (4)
- 538 Seminar: Law Enforcement Problems (4)
- 581 Criminal Justice Bibliography and Research (4)

Required in Political Science (20 units):

- 460AB Foundations of Public Administration (2-2)
- 461AB Municipal Administration (2-2)
- 560 Seminar: Public Administration (4)
- 561 Seminar: State and Local Government and Administration (4)
- 590 Seminar: Philosophy of Public Service (4)

Electives in Criminal Justice (5-9 units):

Select with approval of adviser.

Comprehensive Exam or Thesis (0, 4 units):

Comprehensive Examination

or

- 599 Thesis (4)

Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. Courses required in the undergraduate option may not be applied to the master's degree. For course descriptions, see undergraduate program.

- 401 Innovative Management Systems (4)
- 404 Unusual Occurrence Management (4)
- 408 Methods of Supervision (4)
- 423 Community Relations Program Management (4)
- 428 Contemporary Criminal Procedures (4)
- 429 Administrative Law (4)
- 435 Contemporary Vice Problems (4)

- 436 Correctional Institution Management (4)
- 437 Traffic Management Systems (4)
- 439 Juvenile Law and Procedure (4)
- 447 Drug Control Systems (4)
- 460 Law Enforcement, Public Schools, and the Community (4)
- 461 Physical Evidence (4)
- 475 Contemporary Security Administration (4)
- 476 Retail Commercial Security (4)
- 491 Contemporary Studies in Criminal Justice (1-8)
- 499 Undergraduate Directed Study (1-4)

Graduate Courses

Classified graduate standing required for admission.

501 Seminar: Administration of Justice (4)

Advanced studies of interrelating component parts of criminal justice system, with particular emphasis on managerial aspects of agencies involved.

506 Seminar: Comparative Law Enforcement Administration (4)

Comparison of criminal justice systems of world, past and present; American systems, national, state, county, and municipal levels; military police systems. Investigation of organizations, practices and trends.

538 Seminar: Law Enforcement Problems (4)

Advanced investigation and reports on selected critical problems in criminal justice; emphasis on scientific method and acquaintance with reliable methods of research.

551 Advanced Criminalistics I (3)

Prerequisite: Consent of instructor. Methods of scientific analysis, comparison and identification of physical evidence and its presentation in court; blood alcohol, prints and imprints, paint, glass, soil, dust, dirt and debris. Lecture 2 hours, laboratory 3 hours.

552 Advanced Criminalistics II (3)

Prerequisite: Consent of instructor. Scientific analysis, comparison and identification of physical evidence and its presentation in court: blood, biological fluids, stains, hairs and textile fibers, weapons, bullets and cartridges, tool marks, bombs and explosives. Lecture 2 hours, laboratory 3 hours.

553 Advanced Criminalistics III (3)

Prerequisite: Consent of instructor. Methods of scientific analysis, comparison and identification of physical evidence and its presentation in court: arson evidence, narcotic, hypnotic, sedative and hallucinatory drugs, toxicological analysis. Lecture 2 hours, laboratory 3 hours.

554 Identification of Modern Drugs (4)

Prerequisite: Consent of instructor. Nature, therapeutic action, toxicology, chemical and physical identification of modern drugs; drug nomenclature; scientific, official and trade names; drug classifications.

555 Questioned Document Analysis (4)

Prerequisite: Consent of instructor. Analysis of handwriting, typewriting, inks, paper, forgeries, alterations, erasures; use of photographic, microscopic, infrared and ultraviolet light equipment; presentation of evidence in court. Lecture and demonstration.

556 Seminar: Special Problems in Criminalistics (4)

Prerequisite: Consent of instructor. Inquiry in depth into criminalistics, with emphasis on homicide and major crime, literature of criminalistics field, correlation and synthesis of different methods of approach to criminalistics problems.

557 Legal Medicine in Criminalistics (4)

Prerequisite: Consent of instructor. Correlation of findings of autopsy surgeon and criminalist; traumatic injuries, evaluation of wounds, time of death, rigor mortis, post mortem lividity; recognition of poison deaths.

581 Law Enforcement Bibliography and Research (4)

Research methodology in criminal justice field, survey of authorities and their writings, research reports and manuscripts.

598 Graduate Directed Study (1-5)

Prerequisite: Consent of an instructor to act as sponsor. Independent study of advanced topics covering the criminal justice system; regular conferences with sponsor. May be repeated to maximum of 9 units; maximum of 12 units in combination of Criminal Justice 499 and 598 may be applied toward degree.

599 Thesis (1-4)

Prerequisites: Consent of an instructor to act as sponsor and departmental approval of topic prior to registration. Independent research resulting in a thesis. Must be repeated to maximum of 4 units. Graded CR/NC only.

Economics

In School of Business and Economics

The Master of Arts degree in Economics provides the opportunity for advanced study of economic theory and research, as well as preparation for careers as teachers and economists.

Admission to the Program

In addition to the University requirements for admission to graduate study with conditionally classified standing, the following are prerequisite to admission as a classified graduate student:

(1) Equivalent of the bachelor's degree in Economics at Cal State L.A., or completion with an average grade of *B* (3.0) of a set of prerequisite courses selected by an Economics adviser at Cal State L.A.

(2) A g.p.a. of at least 2.75 in 90 quarter units of undergraduate work, or an upper division g.p.a. of at least 2.5 and an average grade of *B* (3.0) in 14 quarter units of preselected qualifying courses taken at Cal State L.A. beyond the bachelor's degree.

(3) A combined total score of 1000 or more on the V and Q sections of the aptitude test of the GRE. A lower total score may be acceptable, if upper division g.p.a. is 2.75 or higher. This portion of the GRE need not be taken until completion of prerequisite courses, but official scores must be on file before classified graduate standing can be granted. In addition a score as high as the most recently reported national median on the GRE Advanced Test in Economics is required.

(4) Filing of a program, including electives, with the School of Business and Economics.

If qualifying courses are required, they must be so designated in advance. They may include upper division prerequisite courses.

Requirements for the Degree

The 45 unit program consists of core requirements which are to be taken together with either the General Option or the Analytic-Quantitative Option.

Required in Economics (12 units):

510 Seminar: Advanced Microeconomic Theory I (4)

520 Seminar: National Income and Employment Theory (4)
and

511 Seminar: Advanced Microeconomic Theory II (4)
or

521 Seminar: Monetary Theory and Policy (4)

Options

Select one of following options for 28–33 units. Electives are determined in conference with graduate adviser to meet the professional objectives of students.

GENERAL OPTION

Required Courses (8 units):

In Economics:

497 Economic Research (4)

In Business:

409 Advanced Applied Business and Economic Statistics (4)

Electives (20–25 units):

Select 400- and 500-level courses in Economics, Social and Behavioral Sciences, Business, or Mathematics, in consultation with graduate adviser. At least 12 units must be 500-level Economics courses.

ANALYTIC-QUANTITATIVE OPTION

Required in Economics (8 units):

413 Mathematical Economics (4)

414 Econometrics (4)

Electives (20–25 units):

Select 400- and 500-level courses in Economics and/or Business 409, 482, 486, 491, 496A, 502, 570, or Mathematics 472, 474, 475, 520, 521. Electives must include at least one course in statistics: Business 409 or 491 or Mathematics 475. A sufficient number must be at the 500-level to bring total 500-level units for core and electives to at least 23. Prerequisites for individual courses should be noted.

Comprehensive Exam or Thesis (0, 5 units):

Comprehensive Examination

or

599AB Thesis (2,3)

Students selecting the comprehensive examination option must take examinations in macro- and microeconomic theory and in a third field of economics chosen by the student. Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Courses in Economics

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

406 Principles of International Economics (4)

412 Development of Economic Thought (4)

- 413 Mathematical Economics (4)
- 414 Econometrics (4)
- 420 Labor Legislation (4)
- 425 Industry Structure and Regulation (4)
- 433 Public Finance (4)
- 435 Employment, Inflation and Growth (4)
- 440 Urban and Regional Economics (4)
- 445 Economics of Natural Resources and the Environment (4)
- 460 Economic Growth of Underdeveloped Areas (4)
- 471 American Economic History (4)
- 480 Comparative Economic Systems (4)
- 490 Economic Issues and Policies (4)
- 495 Senior Seminar: Theoretical Topics (4)
- 497 Economic Research (4)

Graduate Courses

Classified graduate standing required for admission.

510 Seminar: Advanced Microeconomic Theory I (3-4)

Prerequisite: Economics 410 or equivalent. Scope and method of economic analysis, rule of the market in resource allocation, influences on economic welfare, production system and decisions affecting production and prices. Students in the Business Economics option of the M.S. in Business Administration must register for 3 units, and must enroll in 1 unit of Economics 598 concurrently.

511 Seminar: Advanced Microeconomic Theory II (4)

Prerequisite: Economics 510 or equivalent. Scope and method of economic analysis; emphasis on rule of the market in resource allocation, influence on economic welfare, distribution of income, construction of a general equilibrium system.

520 Seminar: National Income and Employment Theory (3-4)

Prerequisite: Economics 403. Seminar in aggregate income and employment theory; analysis of national income measurement and concepts, macroeconomic theory, fiscal policy. Students in the Business Economics option of the M.S. in Business Administration must register for 3 units, and must enroll in 1 unit of Economics 598 concurrently.

521 Seminar: Monetary Theory and Policy (3-4)

Prerequisite: Economics 520. Seminar in aggregate income and employment theory; monetary theory, role of money in macroeconomic theory, monetary policy. Students in the Business Economics option of the M.S. in Business Administration must register for 3 units, and must enroll in 1 unit of Economics 598 concurrently.

540 Seminar: Urban Economics (4)

Prerequisite: Major in related subject area with background in introductory economics, or consent of instructor. Structure of urban economy; emphasis on public finance, transportation, housing and urban renewal, pollution.

560 Seminar: Economic Growth in Underdeveloped Areas (4)

Prerequisite: Economics 460. Alternative theories of growth, doctrines of factor endowments, population, investment criteria, foreign trade, financial policy and planning, and effects on growth. Special topics and area studies for individual needs.

561 Seminar: International Economics (4)

Prerequisite: Economics 406 or equivalent. Advanced study and analysis of theories concerning economics of international exchange of goods, services, capital and government transfers; discussion of international institutions regulating trade and payments among nations.

571 Seminar: Economic History of U.S. (4)

Prerequisite: Economics 471. Economic factors in Revolutionary War, national debt, tariff debates, Civil War, development of banking, frontier movements, immigration, modifications of laissez-faire capitalism, trusts and anti-trusts, Great Depression and full employment.

590 Seminar: Contemporary Economic Analysis and Policy (4)

Selected analytical and policy issues underlying current developments in theoretical, empirical, and policy research; topics will reflect student interest and faculty specialty. May be repeated once as subject matter changes, with consent of instructor.

598 Graduate Directed Study (1-2)

Investigation of an approved project leading to an oral and/or written report; project selected in conference with seminar professor before registration, and arrangements made for regular meeting during quarter.

599A Thesis (1-2)

Prerequisites: Completion of required core courses and written approval of graduate adviser. Prior to completion, students will have (1) completed a tentative outline of thesis, (2) petitioned graduate adviser for appointment of a thesis committee, and (3) submitted tentative outline to thesis committee. Graded CR/NC only.

599B Thesis (1-3)

Prerequisites: Economics 599A and written approval of chairperson of thesis committee. Completion of thesis under direct supervision of thesis committee. Graded CR/NC only.

School of Education

Philip D. Vairo, *Dean of the School*

Carleton B. Shay, *Associate Dean, Academic Affairs*

L. Rogers Liddle, *Associate Dean, Fiscal Affairs*

Fernando Hernandez, *Assistant Dean, School and Community Affairs*

Office of the School: King Hall D2069, phone 224-3787

Graduate Advisement Center: King Hall D2070, phone 224-3161

Programs of Graduate Study

The School of Education offers programs leading to certification for specified fields of professional employment in California public schools and work leading to advanced degrees.

Because the University is located in the heart of metropolitan Los Angeles, programs in the School of Education reflect concern with the problems and challenges of urban education with particular emphasis on bilingual/cross-cultural issues.

Admission to Programs

Admission to the University does not automatically admit students to credential or post-baccalaureate study in the School of Education. Formal application is required for admission to a specific degree or credential program. Teaching credential application procedures are described in the Undergraduate Programs section. Applications for other credentials must be filed with the department specified in the descriptions of such credential programs.

Students entering graduate programs in Education must meet the University requirements for admission to graduate study, and additional requirements set forth for each program.

Post-baccalaureate Year

State of California credential requirements include a fifth year of study completed after the baccalaureate degree. Students may elect to complete all or part of their professional requirements in the fifth year, pursue a master's degree, or follow a planned course of study approved by their adviser.

Credential Candidacy

Students in the post-baccalaureate credential year who complete directed teaching at Cal State L.A. and are eligible for the University-recommended preliminary credential are formally advanced to candidacy in the teaching credential program. Transfer students with preliminary credentials are advanced to candidacy upon completion of admissions requirements given above and satisfaction of the advanced composition requirement.

University recommendation for the *clear* credential will be granted upon satisfaction of the following requirements completed in post-baccalaureate status:

- (1) Advancement to candidacy in the credential program.
- (2) Minimum of 45 units, of which a minimum of 24 units must be taken in residence.
- (3) Maximum of 9 units in approved extension courses. (300–400 level University of California extension courses are approved only in extraordinary circumstances.)
- (4) Minimum of 9 units in Education courses.
- (5) Satisfaction of all statutory and Administrative Code requirements.

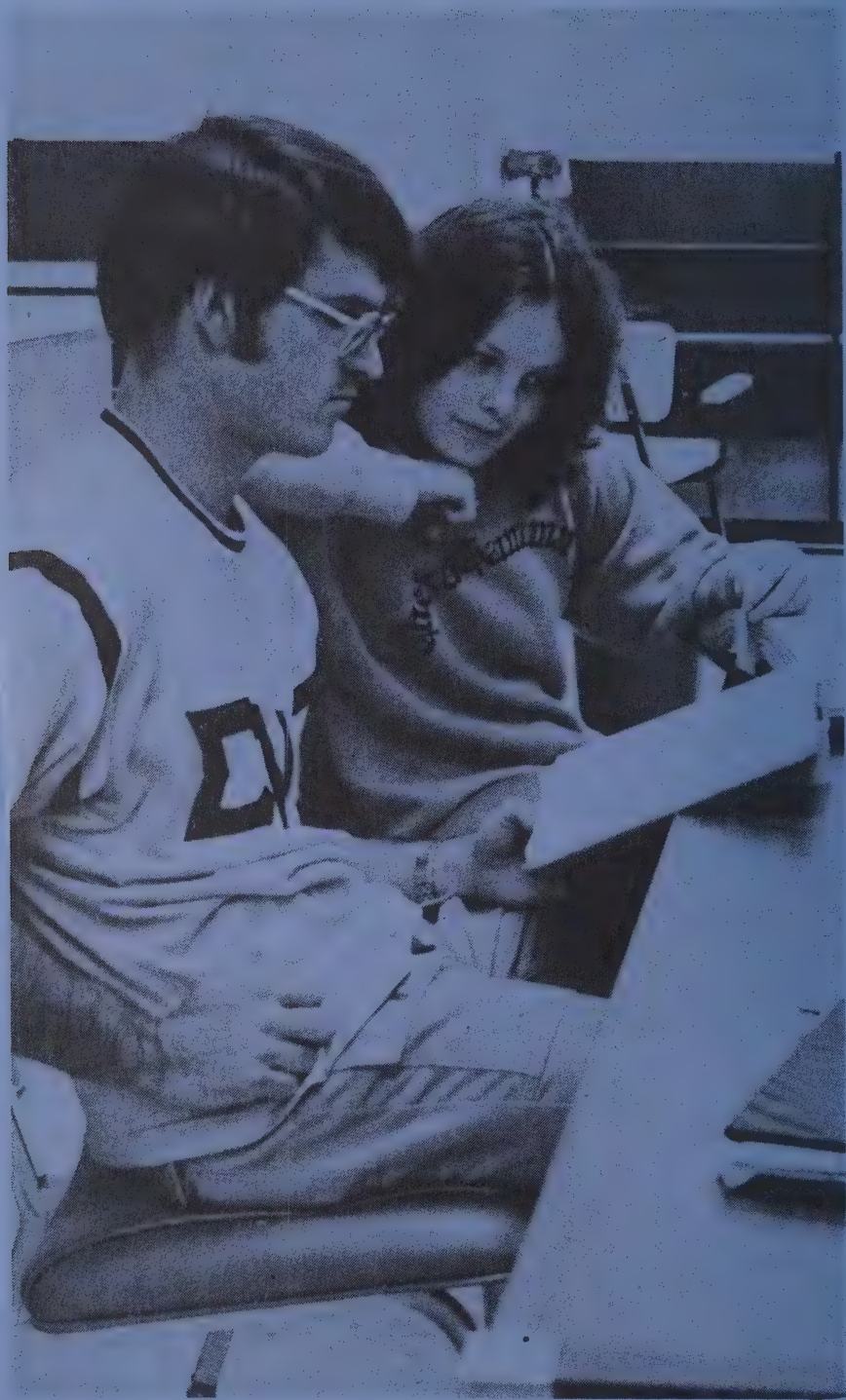
Graduate Degree Programs

The School of Education offers graduate programs leading to the Doctor of Philosophy, Master of Arts, and Master of Science degrees.

The *Doctor of Philosophy degree in Special Education* is offered jointly with the University of California, Los Angeles.

The *Master of Arts degree in Education* provides for election among eight options, as follows:

- (1) Area of Special Interest
- (2) Educational Administration, with a specialization in the areas of the principalship, community education, and supervisor of instructional programs.
- (3) Educational Foundations, with a concentration in areas of social foundations and psychological foundations.
- (4) Elementary Teaching
- (5) Reading
- (6) Secondary Teaching, with a concentration in areas of adult education, instruction, instructional media, and reading.



- (7) Special Education, with a specialization in the areas of communication handicapped, physically handicapped, learning handicapped, severely handicapped, gifted, supervision of special education, and orientation and mobility.
- (8) Urban Education, with a concentration in areas of research, evaluation and measurement in urban education; social, political, economic and legal aspects of urban education; cross-cultural relationships in urban education, bilingual/cross-cultural education; Chicano students in urban schools, teaching in the inner-city elementary and secondary school.

The *Master of Arts degree in Speech Pathology and Audiology*, offered jointly by the Departments of Special Education and Speech Communication and Drama, provides for areas of concentration in audiology and in speech pathology as well as a program which includes both. The *Master of Science degree in Counseling* provides for the following options:

- (1) School Counseling
- (2) Community College Counseling
- (3) Rehabilitation Counseling

Programs leading to the degrees with options listed above are described in the departments of the School of Education in which they are offered. The Master of Arts degree options in Reading and in Area of Special Interest, which are interdepartmental programs, are described on the following pages.

Students entering graduate programs in Education are cautioned that they must meet specific requirements set forth for each program, in addition to the University requirements for admission to graduate study.

Restriction on Credit Earned In Variable-unit Courses

The following restriction applies for credit earned in all Master's degree programs in the School of Education:

- (1) Limit of 12 units from 499, 597, and 598 on programs without a thesis or project.
- (2) Limit of 15 units from 499, 597, 598, and 599 on programs with a thesis or project.

Departmental Course Prefixes

Courses of instruction in the School of Education are listed under each of the departments except for interdepartmental courses, as follows: Educational Administration (EDAD); Educational Foundations (EDFN); Elementary Education (EDEL); Guidance and Pupil Personnel Services (EDGC); Secondary Education (EDSE); Special Education (EDSP); and interdepartmental (EDUC).

Courses in Education

Graduate Courses

Classified graduate standing required for admission, except for maximum of 8 units specifically recommended for a credential.

504 Optional Systems in Education (4)

Prerequisite: Teaching credential. Trends in alternative education such as continuation education, year-round schools, alternative schools, with specific reference to Southern California.

524 Diagnosis and Remedial Reading Procedures for Clinicians (5)

Prerequisites: Education 435, consent of instructor, and Elementary Education 400 or Secondary Education 423 or equivalent. Emphasis upon individualized diagnosis and remediation of critically handicapped readers. Techniques for clinicians and reading consultants who assist classroom teachers.

526 Principles and Practices of Leadership (4)

Prerequisites: Enrollment in School of Education credential or degree program and consent of instructor. Training in social sensitivity, behavioral flexibility, interpersonal knowledge and skills; understanding of self and others; effects of leadership in urban society. Sensitivity training laboratory. Meets 5 hours weekly. Credit not awarded for both Education 526 and Educational Administration 526.

528 Creative Behavior: Development and Facilitation (4)

Prerequisites: Teaching credential, teaching experience, or consent of instructor. Factors inhibiting and facilitating creative thinking directed toward stimulating and productively utilizing creative abilities of students in urban society.

536 Cross-cultural Studies Materials for Classroom Use (4)

Collection, analysis, adoption or adaptation, and development of cross-cultural studies materials, e.g., Afro-American, Chicano, Filipino-American, for use in classroom.

538 Advanced Design and Evaluation of Reading Programs (4)

Prerequisites: Valid California teaching credential. Education 540 and 541 (latter may be taken concurrently). Reading program planning and evaluation; articulation of school and district reading programs; delineation of reading specialist responsibilities; development and maintenance of school-community channels of communications.

539 Instructional Strategies for Inner-city Schools (4)

Prerequisite: Teaching credential or consent of instructor. Instructional strategies, resources, and organizational patterns designed for teaching children and youth of inner-city schools; methods of dealing with typical learning disabilities of inner-city school children. Fieldwork included.

540 Clinical Procedures in Reading (2)

Prerequisites: Education 435, 524; Elementary Education 400 or 411 or Secondary Education 423; consent of instructor. Observation and supervised experience in individual diagnostic and therapeutic procedures with reading clinic pupils who evidence reading disabilities. May be repeated to maximum of 6 units.

541 Field Work in Reading (2)

Prerequisites: Education 540 and consent of instructor. Supervised field experience in organization, administration, and supervision of reading programs at district or school level. May be repeated to maximum of 6 units.

556 Seminar for Beginning Teachers (3)

Restricted to credentialed teachers with less than four years of experience. Identification and examination of classroom problems encountered by beginning teachers.

560 Principles and Practices of Curriculum Development (5)

Critical examination of curricular trends in historical perspective: sociological change, research in child growth and development, basic philosophies; consideration of objectives, practices, materials, and evaluation inherent in curriculum development process. Credit not awarded for both Education 560 and Educational Administration 518.

563 Supervision of Instruction and Curriculum (3)

Prerequisite: Education 560 (may be taken concurrently). History of school supervision, principles and procedures of supervision in elementary and secondary schools; communication; interpretation of roles of principal, special supervisor, and general supervisor; problems, trends, evaluation.

581 Bilingual/Cross-cultural Advanced Fieldwork (2)

Prerequisites: Teaching credential and approval of bilingual/cross-cultural advisory committee. Teaching in bilingual/cross-cultural situations; demonstration of effective teaching techniques to teachers and parents; planning and conducting inservice meetings for teachers and paraprofessionals; critiques of existing programs; development of materials. Must be repeated to total of 4 units.

597 Graduate Research (1-4)

Prerequisites: Educational Foundations 500 or 509, consent of an instructor to act as sponsor, and departmental approval of project prior to registration. Independent research, under guidance of the faculty. May be repeated for credit. Graded CR/NC only.

598 Graduate Directed Study (1-4)

Prerequisites: A g.p.a. of 3.0 in all graduate work in Education, consent of department chairperson, and consent of an instructor to act as sponsor. Independent directed study of advanced topics in field; regular conferences with sponsor. May be repeated for credit.

599AB Graduate Thesis or Project (2, 1-5)

599A (2) Prerequisites: Educational Foundations 500 or 509, advancement to candidacy, and written approval of graduate adviser. Prior to completion student will have (1) completed tentative outline of thesis or project, (2) petitioned graduate adviser for appointment of a thesis committee, and (3) submitted tentative outline to thesis committee. Graded CR/NC only.

599B (1-5) Prerequisites: Education 599A and written approval of thesis committee chairman. Completion of thesis or project under direct supervision of thesis committee. Must be repeated to total of 5 units. Graded CR/NC only.

Educational Administration

The Department of Educational Administration offers a program leading to the Master of Arts degree in Education with an option in Educational Administration, and a program leading to the Administrative Services Credential, with specializations in the principalship, supervisorship of instructional programs, supervisor of special education, community education, and central office administration. The credential program is approved by the Commission for Teacher Preparation and Licensing.

The Faculty

Professors: Eugene Benedetti, Harold D. Hall, Ralph Ernest Kloepper, John O. Niederhauser, Gerald Prindiville, Gerald R. Rasmussen (Chairperson).

Assistant Professors: Raleigh Jackson, Kenneth F. Palmer, Raymond D. Terrell.

Admission to the Program

In addition to the general University requirements for admission to graduate study, applicants for the master's or credential program must meet the following requirements:

- (1) Completion of departmental application forms and assignment of permanent adviser.
- (2) A 2.75 g.p.a. in the last 90 quarter units.
- (3) Completion of personal, psychological and professional examinations and inventories required by the department.
- (4) Meeting admission standards developed by the department.
- (5) Counseling interviews with department chairperson and permanent adviser.
- (6) A program of study approved by the permanent adviser and department chairperson.

Master of Arts Degree

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, and either a thesis or a comprehensive examination are required. There is a limit on credit which may be earned in variable-unit courses. See page 313.

Required Core (24 units):

In Educational Administration:

- 503 Basic Course in Education Administration and Supervision (4)
- 506 Educational Leadership and Decision Making (3)
- 509 Basic School Law and Finance (4)
- 512 Educational Management (3)
- 515 Social and Political Forces in Educational Administration (3)
- 518 Principles and Practices of Curriculum Development (3)

In Educational Foundations:

- 500 Evaluation of Educational Research (4)

NOTE: Students who elect the comprehensive examination must take Educational Administration 554.

Areas of Specialization (21 units):

Select one of following specializations:

THE PRINCIPALSHIP

Required in Educational Administration (12-14 units):

Select three from following:

- 526 Principles and Practices of Leadership (3)
- 527 Advanced Educational Management and Evaluation (3 or 4)
- 530 Seminar: Advanced Curriculum Development (3 or 4)
- 554 Seminar: Research and Development in Educational Administration (3)

Select one from following:

- 572 Seminar: Elementary Administration (3)
- 575 Seminar: Junior High and Middle School Administration (3)
- 578 Seminar: High School Administration (3)

Electives (7-9 units):

Select with approval of adviser.

COMMUNITY EDUCATION ADMINISTRATION

Required in Educational Administration (12-15 units):

Select four from following:

- 526 Principles and Practices of Leadership (3)
- 539 Educational Personnel Administration (3 or 4)
- 545 Educational Facility Management (3 or 4)
- 551 Seminar: Community Education (3 or 4)
- 554 Seminar: Research and Development in Educational Administration (3)

Electives (6-9 units):

Select with approval of adviser.

SUPERVISOR OF INSTRUCTIONAL PROGRAMS

This specialization includes two sub-areas: (A) GENERAL and (B) SPECIAL EDUCATION. The requirements for each sub-area are as follows:

(A) SUPERVISOR-GENERAL

Required in Educational Administration (12-15 units):

Select four from following:

- 526 Principles and Practices of Leadership (3)
- 527 Advanced Educational Management and Evaluation (3 or 4)
- 530 Seminar: Curriculum Development (3 or 4)
- 548 Seminar: Supervision of Instructional Programs (3 or 4)
- 554 Seminar: Research and Development in

Educational Administration (3)**Electives (6-9 units):**

Select with approval of adviser.

(B) SUPERVISOR-SPECIAL EDUCATION

Prerequisite to this sub-area are the completion of a teaching credential authorizing service in one or more special education programs.

Required Courses (18-21 units):**In Education:**

545 Fieldwork in Special Education Administration (3)

550 Organization and Administration of Special Education Programs (4)

In Educational Administration:

548 Seminar: Supervision of Instructional Programs (3 or 4)

Select *three* from following:

In Special Education:

602 Practicum in Program Development and Evaluation (2)

In Educational Administration:

526 Principles and Practices of Leadership (3)

527 Advanced Educational Management and Evaluation (3 or 4)

530 Seminar: Advanced Curriculum Development (3 or 4)

554 Seminar: Research and Development in Educational Administration (3)

Electives (0-3 units):

Select with approval of adviser to complete 45 units.

Comprehensive Exam or Thesis (0, 7 units):

Comprehensive Examination
or

599AB Thesis (2,5)

Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Students may pursue the thesis option only when they meet specified departmental and school criteria.

Administrative Services Credential

Regulations, policies, and procedures regarding the program for the Administrative Services Credential, available from the Department of Educational Administration, are in accordance with guidelines developed by the Commission for Teacher Preparation and Licensing. This program is based on a set of competencies necessary for successful performance as a California school administrator. The credential qualifies students for all administrative and supervisory services in grades pre-kindergarten through 12 in California public schools.

Minimum Credential Requirements

The following requirements are subject to change without notice. Students are advised to consult the department for current requirements.

Minimum requirements for issuance of the Administrative Services Credential include:

(1) Forty-five units of acceptable post-baccalaureate course work.

(2) Three years of successful full-time teaching.

(3) A valid California teaching credential at the level of desired administrative specialization.

(4) A master's degree.

(5) Completion of required courses in Education and one of the specialization sequences.

Required Core (24 units):**In Educational Administration:**

503 Basic Course in Educational Administration and Supervision (4)

506 Educational Leadership and Decision Making (3)

509 Basic School Law and Finance (4)

512 Educational Management (3)

515 Social and Political Forces in Educational Administration (3)

518 Principles and Practices of Curriculum Development (3)

In Educational Foundations:

500 Evaluation of Educational Research (4)

Areas of Specialization (21 units):

Select one of following specializations:

THE PRINCIPALSHIP**Required in Educational Administration (12-14 units):**

Select *three* from following:

526 Principles and Practices of Leadership (3)

527 Advanced Educational Management and Evaluation (3 or 4)

530 Seminar: Advanced Curriculum Development (3 or 4)

554 Seminar: Research and Development in Educational Administration (3)

Select *one* from following:

572 Simulation Seminar: Elementary Administration (3)

575 Simulation Seminar: Junior High and Middle School Administration (3)

578 Simulation Seminar: High School Administration (3)

Electives (7-9 units):

Select with approval of adviser.

COMMUNITY EDUCATION ADMINISTRATION**Required in Educational Administration (12-15 units):**

Select *four* from following:

526 Principles and Practices of Leadership (3)

539 Educational Personnel Administration (3 or 4)

545 Educational Facility Management (3 or 4)

551 Seminar: Community Education (3 or 4)

554 Seminar: Research and Development in Educational Administration (3)

Electives (6-9 units):

Select with approval of adviser.

SUPERVISOR OF INSTRUCTIONAL PROGRAMS

This specialization includes two sub-areas: (A) GENERAL and (B) SPECIAL EDUCATION. The requirements for each sub-area are as follows:

(A) SUPERVISOR - GENERAL**Required in Educational Administration (12-15 units):**

Select four from following:

- 526 Principles and Practices of Leadership (3)
- 527 Advanced Educational Management and Evaluation (3 or 4)
- 530 Seminar: Advanced Curriculum Development (3 or 4)
- 548 Seminar: Supervision of Instructional Programs (3 or 4)
- 554 Seminar: Research and Development in Educational Administration (3)

Electives (6-9 units):

Select with approval of adviser.

(B) SUPERVISOR SPECIAL EDUCATION

Prerequisite to this sub-area are the completion of a teaching credential authorizing service in one or more special education programs.

Required Courses (18-21 units):

In Special Education:

- 503 Fieldwork in Special Education Administration (3)
- 585 Organization and Administration of Special Education Programs (4)

In Educational Administration:

- 548 Seminar: Supervision of Instructional Programs (3 or 4)

Select three from following:

In Special Education:

- 602 Practicum in Program Development and Evaluation (2)

In Educational Administration:

- 526 Principles and Practices of Leadership (3)
- 527 Advanced Educational Management and Evaluation (3 or 4)
- 530 Seminar: Advanced Curriculum Development (3 or 4)
- 554 Seminar: Research and Development in Educational Administration (3)

Electives (0-3 units):

Select with approval of adviser to complete 45 units.

CENTRAL OFFICE ADMINISTRATION

A minimum of 90 units of acceptable graduate course work is required for this specialization. Prerequisite for admission to the program is demonstrated competencies required in either The Principalship or Supervisor of Instructional Programs specializations.

This specialization includes four sub-areas: (A) THE SUPERINTENDENCY, (B) PERSONNEL DIRECTOR, (C) CURRICULUM DIRECTOR, and (D) BUSINESS MANAGER.

(A) THE SUPERINTENDENCY

Required in Educational Administration (21-27 units):

- 526 Principles and Practices of Leadership (3)
- 533 Advanced School Law (3 or 4)
- 534 Advanced School Finance (3 or 4)
- 535 Seminar: School Business Administration (3 or 4)
- 539 Educational Personnel Administration (3 or 4)
- 542 Advanced Educational Personnel Administration (3 or 4)
- 545 Educational Facility Management (3 or 4)

Electives (18-24 units):

Select with approval of adviser.

(B) PERSONNEL DIRECTOR

Required in Educational Administration (15-19 units):

- 526 Principles and Practices of Leadership (3)
- 533 Advanced School Law (3 or 4)
- 534 Advanced School Finance (3 or 4)
- 539 Educational Personnel Administration (3 or 4)
- 542 Advanced Educational Personnel Administration (3 or 4)

Electives (26-30 units):

Select with approval of adviser.

(C) CURRICULUM DIRECTOR

Required in Educational Administration (15-19 units):

- 526 Principles and Practices of Leadership (3)
- 530 Seminar: Advanced Curriculum Development (3 or 4)
- 533 Advanced School Law (3 or 4)
- 539 Educational Personnel Administration (3 or 4)
- 548 Seminar: Supervision of Instructional Programs (3 or 4)

Electives (26-30 units):

Select with approval of adviser.

(D) BUSINESS MANAGER

Required in Educational Administration (15-20 units):

- 533 Advanced School Law (3 or 4)
- 534 Advanced School Finance (3 or 4)
- 535 Seminar: School Business Administration (3 or 4)
- 539 Educational Personnel Administration (3 or 4)
- 545 Educational Facility Management (3 or 4)

Electives (25-30 units):

Select with approval of adviser.

Department Certificate Program

Upon completion of a credential specialization, students are awarded a University-approved "Certificate of Completion" attesting to their competence in that specialization. Certificates may be earned in the following specializations: Elementary Principal, Junior High/Middle School Principal, Senior High Principal, Community Education Administration, Supervisor of Instructional Programs, Administration and Supervision of Special Education, Superintendency, Personnel Director, Curriculum Director, and Business Manager.

Internship Program

In response to requests from school districts within Cal State L.A.'s service area, the Department of Educational Administration has established an internship program.

This program provides opportunities for school districts to cooperate with the Department of Educational Administration in providing internship experiences for selected individuals, under the provisions of the Ryan Act (Education Code, beginning with Section 13101) or independently.

The program offers opportunities for high potential individuals to perform administrative/supervisory functions under close University supervision while completing course requirements for the regular services credential.

Persons interested in specific details of the program should contact the Department.

Courses in Educational Administration

Classified graduate standing required for admission, except for maximum of 8 units specifically recommended for a credential.

503 Basic Course in Educational Administration (4)

Careers in educational administration and supervision; history and philosophy of American educational structure; federal, state, intermediate and local school organization and interrelationships.

506 Educational Leadership and Decision-Making (3)

Prerequisite: Educational Administration 503 (may be taken concurrently with approval of department). School administrative and organizational theory; analysis of administrative role, process; research in leadership applied to decision-making and communication.

509 Basic School Law and Finance (4)

Legal aspects of education, including rights, duties and liabilities of employer, employees, parents, and students; principles and problems in school finance; sources of district income.

512 Educational Management (3)

Prerequisite: Educational Administration 503 or consent of department. Investigation of principles of educational management; basic administrative tools and process as well as product in the school setting, including basic personnel relations.

515 Social and Political Forces in Educational Administration (3)

Prerequisite: Educational Administration 503 or approval of department. Developmental study of social and political forces affecting education, including various operational techniques and motives.

518 Principles and Practices of Curriculum Development (3)

Prerequisite: Educational Administration 503 or approval of department. Development of educational philosophies; elementary and secondary school trends. Administration of learning designs, resources, teaching procedures, content selection, skills, methods; evaluation in cooperative planning. Credit not awarded for both Education 560 and Educational Administration 518.

526 Principles and Practices of Leadership (3)

Prerequisite: Educational Administration 506 or consent of instructor. Training in social sensitivity, behavior flexibility, interpersonal knowledge and skills. Understanding of self and others; effects of leadership pertaining to school administration and supervision. Sensitivity training laboratory 4 hours weekly. Graded CR/NC only. Credit not awarded for both Education 526 and Educational Administration 526.

527 Advanced Educational Management and Evaluation (3 or 4)

Prerequisites: Educational Administration 512 and admission to department program or consent of instructor. Management and evaluation of educational programs for school administrators. Development of goals and objectives, evaluation of educational outcomes and instructional performance; use of education management systems. Lecture (3 units) required; fieldwork (1 unit of 527F) optional.

530 Seminar: Advanced Curriculum Development (3 or 4)

Prerequisites: Educational Administration 518 and admission to department program or consent of instructor. Advanced study in curriculum development related to philosophies, trends, practices, problems, school and community personnel, total instructional program, in-service education and evaluation. Lecture (3 units) required; fieldwork (1 unit of 530F) optional.

533 Advanced School Law (3 or 4)

Prerequisite: Educational Administration 509 or consent of instructor. Effects of laws, legal materials, judicial decisions on school operations. Techniques of legal research and its relation to school administration. Lecture (3 units) required; fieldwork (1 unit of 533F) optional.

534 Advanced School Finance (3 or 4)

Prerequisite: Educational Administration 509 or consent of instructor. Theory and practice in school finance; federal, state, and local support programs; budget development and control; computation of tax rates and auditing. Lecture (3 units) required; fieldwork (1 unit of 534F) optional.

535 Seminar: School Business Administration (3 or 4)

Prerequisites: Educational Administration 512 and 534 or consent of instructor. Theory and practice of school business management including accounting, payroll administration, purchasing, supply management and other general support services. Lecture (3 units) required; fieldwork (1 unit of 535F) optional.

536 Special Seminar: Problems in School Administration (2-5)

Prerequisite: Administration or supervision credential or consent of instructor. Theoretical and practical aspects of special problems in school administration to be announced in *Schedule of Classes*. Course does not meet credential requirements.

539 Educational Personnel Administration (3 or 4)

Prerequisites: Educational Administration 503, 509, 512, or consent of instructor. Principles, practices and procedures in public school personnel administration; recruitment, selection, placement, evaluation, retention, dismissal, welfare benefits. Lecture (3 units) required; fieldwork (1 unit of 539F) optional.

542 Advanced Educational Personnel Administration (3 or 4)

Prerequisite: Educational Administration 539 or consent of instructor. Practices and procedures affecting employer-employee relations; emphasis on development of certificated personnel policies including grievance procedures. Lecture (3 units) required; fieldwork (1 unit of 542F) optional.

545 Educational Facility Management (3 or 4)

Prerequisite: Educational Administration 512 or consent of instructor. Planning, design, evaluation, maintenance, and function of facilities related to schools and school district. Lecture (3 units) required; fieldwork (1 unit of 545F) optional.

548 Seminar: Supervision of Instructional Programs (3 or 4)

Prerequisite: Admission to department program or consent of instructor. Development of skills in educational supervision; administrative communication, group dynamics, staff development, leadership, problem solving. Lecture (3 units) required; fieldwork (1 unit of 548F) optional.

551 Seminar: Community Education (3 or 4)

Prerequisite: Educational Administration 515 or consent of instructor. Development of skills in educational administration; establishment, administration, and maintenance of community education programs. Lecture (3 units) required; fieldwork (1 unit of 551F) optional.

554 Seminar: Research and Development in Educational Administration (3)

Prerequisites: Educational Foundations 500, admission to department program, and completion of core. Basic research tools review; introduction to methods of research in educational administration; submission of a research and development project required.

572 Simulation Seminar: Elementary Administration (3)

Prerequisites: Admission to departmental program, completion of core, and required courses in principal-

ship option. Application through simulation techniques of administrative and supervisory theories, structures, and methods applied to administration of elementary schools.

575 Simulation Seminar: Junior High and Middle School Administration (3)

Prerequisites: Admission to departmental program; completion of core and required courses in principalship option. Application through simulation techniques of administrative and supervisory theories, structures, and methods applied to administration of junior high and middle schools.

578 Simulation Seminar: High School Administration (3)

Prerequisites: Admission to departmental program; completion of core and required courses in principalship option. Application through simulation techniques of administrative and supervisory theories, structures, and methods applied to administration of high schools.

581ABCD Fieldwork in Educational Administration (3-3-3-3)

Prerequisite: Departmental approval. Administrative, supervisory, and curricular experiences at school or district level. Graded CR/NC only.

584ABCD Fieldwork in Central Office Administration and Supervision (3-3-3-3)

Prerequisites: Admission to central office administration option and departmental approval. Intensive and extensive participation in general school administration; areas of emphasis determined in consultation with adviser. Graded CR/NC only.

587ABCD Internship in Educational Administration (3-3-3-3)

Prerequisites: Admission to internship program; approval of both department and school district. Participation in school administration and supervision in school district where student is employed; supervision by on-site administrator and University instructor; regular seminar sessions. Graded CR/NC only.

Educational Foundations

The Department of Educational Foundations offers programs leading to the Bilingual/Cross-cultural Specialist credential with Afro-American, Chicano, Chinese and Japanese options; and programs leading to the Master of Arts degree in Education, with options in Educational Foundations and Urban Education.

Master of Arts Degree

Two options for the Master of Arts degree in Education are offered. The option in Educational Foundations offers concentrations in social foundations and psychological foundations, and is intended for educators interested in the theoretical bases of education. The option in Urban Education is intended for those interested in the problems and challenge of providing education in metropolitan schools, and offers a number of areas of concentration.

Option in Educational Foundations

Admission to the Program

In addition to the University requirements for admission to graduate study, applicants must have a 2.75 g.p.a. in the last 90 quarter units, a teaching credential or its equivalent, and an undergraduate major or minor or its equivalent in a cognate discipline.

Requirements for the Degree

A total of 45 units is required. At least 23 units must be in 500-level courses and at least 23 must be in Education courses. Students who plan to register in 500-level courses should consult an adviser prior to registration. There is a limit on credit which may be earned in variable-unit courses. See page 313.

In addition, a comprehensive examination or a thesis or project pertaining to the area of concentration is required.

Required in Educational Foundations (4 units):

500 Evaluation of Educational Research (4)

or

509 Methods of Research in Education (4)

Required in Cognate Discipline (12 units):

Select with approval of adviser.

Area of Concentration (8 units):

Select two courses in Educational Foundations from one of following areas:

SOCIAL FOUNDATIONS

506 Comparative Education (4)

507 History of Education (4)

508 Philosophy of Education (4)

525 Educational Sociology (4)

PSYCHOLOGICAL FOUNDATIONS

510 Advanced Educational Psychology (4)

530 Advanced Study in Child Development (4)

533 Seminar: Educational Psychology (4)

Electives in Education (4-21 units):

Select with approval of adviser.

Electives in Cognate Discipline (0-10 units):

Select with approval of adviser.

Comprehensive Exam or Thesis/Project (0, 7 units):

Comprehensive Examination

or

599AB Thesis or Project (2, 5)

Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Option in Urban Education

Admission to the Program

In addition to the University requirements for admission to graduate study, applicants must have a 2.75 g.p.a. in the last 90 quarter units, and a teaching credential or be closely associated with some aspect of the provision of education in an urban setting.

Requirements for the Degree

A total of 45 units is required. At least 23 units must be in 500-level courses and at least 23 must be in Education courses. Students who plan to register in 500-level courses should consult an adviser prior to registration. There is a limit on credit which may be earned in variable-unit courses. See page 313.

In addition, a comprehensive examination or a thesis or project pertaining to the area of concentration is required.

Required Core Program (12 units):

In Educational Foundations:

437 Education and Intergroup Relations (4)

500 Evaluation of Educational Research (4)

or

509 Methods of Research in Education (4)

537 Educational Issues in Metropolitan Areas (4)

Comprehensive Exam or Thesis/Project (0, 7 units):

Comprehensive Examination

or

599AB Thesis or Project (2, 5)

Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Area of Concentration (26–33 units):

Select one of the following:

BILINGUAL/CROSS-CULTURAL EDUCATION

Required in Educational Foundations (6 units):

540AB Bilingual Education Models (3-3)

Electives (12–13 units):

Select three from following.

In Education:

453 Teaching in Bilingual/Cross-cultural Schools (4)

455 Methods of Teaching Reading in Target Language (4)

457 Problems in Teaching and Learning a Second Language (4)

In Educational Foundations:

506B Comparative Education: Bilingual/Cross-cultural (4)

507B History of Education: Bilingual/Cross-cultural (4)

508B Philosophy of Education: Bilingual/Cross-cultural (4)

In Secondary Education:

425 Teaching of English as Second Language (5)

Additional Electives (7–15 units):

Select with approval of adviser.

CHICANO STUDENTS IN URBAN SCHOOLS

Required in Chicano Studies (22 units):

410AB Psychology of the Chicano (4-4)

444 History of the Chicano People (4)

470AB Educational Institutions of the Barrios (4-4)

490 Undergraduate Directed Study (2)

Electives (4–11 units):

Select with approval of adviser.

CROSS-CULTURAL RELATIONSHIPS IN URBAN EDUCATION

Required in Educational Foundations (12 units):

506U Comparative Education: Urban (4)

507U History of Education: Urban (4)

508U Philosophy of Education: Urban (4)

Electives (14–21 units):

Select with approval of adviser.

RESEARCH, EVALUATION AND MEASUREMENT IN URBAN EDUCATION

Required Courses (12 units):

In Educational Foundations:

452 Statistics in Education (4)

501 Research and Program Evaluation in Urban Education (4)

502 Measurement in Urban Education (4)

Select one of following (4 units):

In Educational Foundations:

409 Tests, Measurements and Evaluations (4)

In Educational Guidance:

430 Test Construction (4)

Electives (10–17 units):

Select with approval of adviser.

SOCIAL, POLITICAL, ECONOMIC, AND LEGAL ASPECTS OF URBAN EDUCATION

Required Courses (12 units):

In Educational Foundations:

520 Urban Education and Politics (4)

525 Educational Sociology (4)

In Educational Guidance:

460 Laws Relating to Children and Child Welfare (4)

Electives (14–21 units):

Select with approval of adviser.

TEACHING IN THE INNER-CITY ELEMENTARY SCHOOL

Required Courses (13 units):

In Education:

539 Instructional Strategies for Inner City Schools (4)

560 Principles and Practices of Curriculum Development (5)

In Elementary Education:

590 Problems in Classroom Group Behavior (4)

Electives (13–20 units):

Select with approval of adviser.

TEACHING IN THE INNER-CITY SECONDARY SCHOOL

Required Courses (16 units):

In Education:

539 Instructional Strategies for Inner-City Schools (4)

In Secondary Education:

423 Teaching Reading in Metropolitan Secondary Schools (4)

520 Evaluation of Teaching Competencies in Metropolitan Schools (4)

521 Seminar: Analysis, Interpretation of Instructional Behaviors for Metropolitan Teachers (4)

Electives (10–17 units):

Select with approval of adviser.

Bilingual/Cross-cultural Specialist Credential

The program is designed to prepare credentialed teachers for service in bilingual/cross-cultural classrooms in the public schools in California and has four options: Afro-American, Chicano, Chinese and Japanese.

Admission to the Program

Application for admission to the program may be made by credentialed teachers or by persons admitted to directed teaching for the Multiple Subjects or Single Subject credential.

Academic achievement must be at least that required for admission to the teaching credential program in the University. Graduate students must satisfy University criteria for admission to post-baccalaureate status.

Teaching experience in bilingual/cross-cultural schools meeting the criterion of the California State Department of Education bilingual program (50% minority) is required prior to completion of work for the credential.

The Chicano, Chinese, and Japanese options

within the program require fluency in the appropriate language. There is no language requirement within the Afro-American option. The criterion for minimum fluency is that expected of students who complete third-year study of the language. Applicants will be screened for both written and oral fluency by the Language Admissions Committee.

Requirements for the Credential

The credential requires 44–48 units of study in post-baccalaureate status, including at least 24 units in residence. Since required courses taken prior to receipt of the bachelor's degree will not satisfy this requirement, candidates will select additional course work to total at least 44 units with approval of the adviser. The program includes 20 units in culture and history of the target population, 20 units in education methodology and fieldwork, 4 units selected from cross-cultural areas (Sociology, Anthropology, Speech and Art), and 4 units of linguistics.

Required Courses (12 units):

In Education:

457 Problems in Teaching and Learning a Second Language (4)

539 Seminar: Instructional Strategies for Inner-City Schools (4)

581 Advanced Fieldwork in Bilingual/Cross-cultural Education (4)

In Educational Foundations:

437 Education and Intergroup Relations (4)

Select one of following (4 units):

In Anthropology:

435 Psychological Anthropology (4)

In Art:

460 Multi-cultural Approaches to Visual Arts (4)

In Sociology:

442 Social Change (4)

In Speech:

489 Intercultural Communication (4)

Select one of following options:

AFRO-AMERICAN

Required Courses (28 units):

In Pan-African Studies:

251AB Afro-American History (4-4)

Prerequisite to other courses; does not count towards post-baccalaureate unit requirement.

303AB Afro-American Social Thought (4-4)

400 Personal and Social Adjustment of Afro-Americans (4)

401 Education and Afro-American (4)

420 Afro-American Culture (4)

425 Black Dialect (4)

In Education:

453 Teaching in Bilingual/Cross-cultural Schools (4)

CHICANO

Required Courses (28 units):

In Chicano Studies:

400 Pre-Columbian Literature of Mexico (4)

410A Psychology of the Chicano (4)

430 Chicano Political Behavior (4)

440 Development of Spanish Language in Southwestern U.S. (4)

444 History of the Chicano People (4)

470A Educational Institutions of the Barrios (4)

In Education:

455 Methods of Teaching Reading in the Target Language: Spanish (4)

CHINESE (CANTONESE)

Required Courses (28 units):

In Art:

431 Oriental Art (4)

In Chinese:

310 Chinese Civilization (4)

399 Individual Study (4)

In History:

150 Asian-American History (4)

Prerequisite to other courses; does not count towards post-baccalaureate unit requirement.

494B Modern China (4)

In Philosophy:

435 Eastern Philosophy (4)

In Political Science:

439 Government and Politics of China (4)

In Education:

455 Methods of Teaching Reading in the Target Language: Chinese (4)

JAPANESE

Required Courses (28 units):

In Art:

431 Oriental Art (4)

In Geography:

425 Geography of Japan (4)

In History:

150 Asian-American History (4)

Prerequisite to other courses; does not count towards post-baccalaureate unit requirement.

495B Modern Japan (4)

In Japanese:

310 Japanese Civilization (4)

320 Modern Japanese Structure (4)

In Philosophy:

435 Eastern Philosophy (4)

In Education:

455 Methods of Teaching Reading in the Target Language: Japanese (4)

Courses in Educational Foundations

Graduate Courses

Classified graduate standing required for admission, except for maximum of 8 units specifically recommended for a credential.

500 Evaluation of Educational Research (4)

Criteria for evaluation of educational research; critical analysis of representative research reports. Survey of educational research methods, planning a research study, organization of a research report. Credit not awarded for both Educational Foundations 500 and 509.

501 Research and Program Evaluation in Urban Education (4)

Prerequisite: Educational Foundations 500 or 509, or consent of instructor. Analysis of research and program evaluation in urban education; emphasis on evaluating effectiveness of special programs.

502 Measurement in Urban Education (4)

Prerequisite: Educational Foundations 409, Educational Guidance 430, or Psychology 430. Developing and using culture-fair tests for bilingual examinees; content-referenced tests to measure attainment of local objectives; self concept.

506 Comparative Education (4)

Prerequisite: Educational Foundations 414 or consent of instructor. United States and selected foreign educational systems within the context of their respective cultures. Content varies as follows: 506I, International systems; 506U, Urban education; 506B, Bilingual/cross-cultural education. May be repeated once for credit with different suffix.

507 History of Education (4)

Prerequisite: Four units of History 101ABC or 202AB, or consent of instructor. Historical analysis of current educational issues. Content varies as follows: 507W, Western world; 507U, Urban education; 507B, Bilingual/cross-cultural education. May be repeated once for credit with different suffix.

508 Philosophy of Education (4)

Prerequisites: Philosophy 150 recommended. Selected current philosophies of education and their applications to educative process. Content varies as follows: 508W, Western world; 508U, Urban education; 508B, Bilingual/cross-cultural education. May be repeated once for credit with different suffix.

509 Methods of Research in Education (4)

Prerequisites: Educational Foundations 452 and Psychology 302 or equivalent; Educational Guidance 430 or Psychology 430 or equivalent, and consent of instructor. Nature of scientific thinking, concept of measurement, typical models in educational research, common research errors, selected statistical concepts, problems of criteria, research critiques and assigned projects.

Credit not awarded for both Educational Foundations 500 and 509.

510 Advanced Educational Psychology (4)

Prerequisite: Educational Foundations 413 or equivalent. Recent significant contributions in educational psychology theory and research.

520 Urban Education and Politics (4)

Urban power structure and its interaction with education.

525 Educational Sociology (4)

Prerequisites: Educational Foundations 414 and Sociology 250, or consent of instructor. Application of insights of social sciences to education in areas of cultural anthropology, sociology, political theory, economics.

530 Advanced Study in Child Development (4)

Prerequisites: Educational Foundations 413 or equivalent and at least one year of teaching experience. Recent significant contributions in child development research and theory; emphasis on implications for education of children.

533 Seminar: Educational Psychology (4)

Prerequisites: Educational Foundations 500 and 510 or equivalents. Theory, methodology, and research dealing with selected topics in educational psychology; readings, discussions, and seminar report.

537 Seminar: Educational Issues in Metropolitan Areas (4)

School issues in metropolitan areas as related to urbanization, socio-economic stratification, racial and ethnic differences, desegregation and integration, community relationships and control, school reform, federal and state aid, school personnel.

540AB Bilingual Education Models (3-3)

540A: Design and implementation of language objectives for bilingual/cross-cultural education based on sociological and psychological aspects of learning; alternative models.

540B: Prerequisite: Educational Foundations 540A. Design, implementation, evaluation of alternative bilingual/cross-cultural education programs.

Elementary Education

The Department of Elementary Education offers courses appropriate for pre-service and in-service preparation of teachers in the elementary grades, and programs of directed teaching for candidates for the teaching credential with authorization in multiple subjects instruction. The credential program is described in the *Undergraduate Programs* section.

Master of Arts Degree

The Master of Arts degree programs related to elementary school teaching include the options in Elementary Teaching, Reading, and Area of Special Interest.

Option in Elementary Teaching

The objectives of the Master of Arts degree option in Elementary Teaching are to improve competence in elementary teaching and to develop ability for continued self-directed study.

Admission to the Program

In addition to the University requirements for admission to graduate study, applicants must have a California preliminary or partial fulfillment credential, or a general elementary or kindergarten-primary credential issued by any state. One year of successful elementary school teaching experience is recommended prior to beginning course work in this program.

Requirements for the Degree

A total of 45 units, including 23 units in 500-level courses, and a comprehensive examination are required. Students who intend to register in courses they wish to apply to a master's degree should consult an adviser prior to registration. There is a limit on credit which may be earned in variable-unit courses. See page 313.

Required Courses (13 units):

In Education:

560 Principles and Practices of Curriculum Development (5)

In Educational Foundations:

500 Evaluation of Educational Research (4)

In Elementary Education:

589 Seminar in Elementary Education (4)

Electives (17 units):

Select one from following in Educational Foundations:

507 History of Education (4)

508 Philosophy of Education (4)

525 Educational Sociology (4)

Select one from following in Educational Foundations:

510 Advanced Educational Psychology (4)

530 Advanced Study in Child Development (4)

Select three from following in Elementary Education:

511 Seminar: Research in Teaching Elementary School Reading (3)

521 Seminar: Research in Teaching Elementary School Language Arts (3)

531 Seminar: Research in Teaching Elementary School Mathematics (3)

541 Seminar: Research in Teaching Elementary School Social Studies (3)

551 Seminar: Research in Teaching Elementary School Science (3)

Additional Electives (15 units):

Select with approval of adviser.

Comprehensive Examination:

Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Courses in Elementary Education

Graduate Courses

Classified graduate standing required for admission, except for maximum of 8 units specifically recommended for a credential.

511-551 Research Seminars in Teaching Elementary School Subjects (3-3-3-3-3)

511 Reading (3)

521 Language Arts (3)

531 Mathematics (3)

541 Social Studies (3)

551 Science (3)

Prerequisites: Educational Foundations 500 and teaching experience. Analysis of research on instruction and learning in subject areas named above. Formal research paper required; student interaction, utilizing research in the field.

589 Seminar: Elementary Education (4)

Prerequisite: Completion of or concurrent enrollment in last 10 units for M.A. in Elementary Teaching or consent of instructor. Identification and analysis of problems and trends in urban elementary education.

590 Problems in Classroom Group Behavior (4)

Prerequisites: Teaching credential and teaching experience. Analysis of class behavior and techniques for changing behavior in problem situations; implications of current theory and research for classroom management.

591 Seminar for Elementary Supervising Teachers (3)

Prerequisites: Elementary teaching credential and position with supervisory responsibilities. Identification and study of procedures in supervising observer-participants and student teachers.

Guidance and Pupil Personnel Services

Graduate programs in guidance and pupil personnel services are designed to develop professional competencies in school psychology and counseling. Programs are structured so that a credential with a specialization in pupil personnel services may be acquired concurrently.

Master of Science Degree in Counseling

The Master of Science degree in Counseling provides the following options:

- (1) School Counseling, with Elementary and Secondary specializations
- (2) Community College Counseling
- (3) Rehabilitation Counseling

The Guidance Clinic

The Guidance Clinic is one of the five Associated Clinics. It is an instructional laboratory which provides both training for counselors and counseling services to the community. Students working toward a master's degree or credential in counseling serve as student clinicians.

Admission to the Program

In addition to the University requirements for admission to graduate study, students must have a 2.75 g.p.a. in the last 90 quarter units, must submit the departmental application form, take additional examinations required by the department, and be interviewed by the departmental screening committee.

Applications are considered twice a year, and the dates may vary by option. Students should inquire at the department office for specific schedules.

The program for the Services Credential with a specialization in Pupil Personnel Services has been submitted for approval to the Commission for Teacher Preparation and Licensing.

Prior to admission to the program, students are encouraged to obtain preliminary advisement and begin taking courses, not to exceed 9 units. Upon acceptance, each student is assigned a regular adviser. Each program is planned with sufficient flexibility to permit consideration of a student's individual needs and interests. Certain courses offered by the Departments of Psychology and Sociology may be substituted with adviser's approval.

Field Work

Before students may take courses meeting the field work requirement, they must be approved candidates, must have completed 18 units of

work at Cal State L.A., must be recommended by their adviser, and must be reapproved by the committee for their option.

Requirements for the Program

The program consists of a required core, an option, related field and clinical study, and a comprehensive examination or thesis. Students must demonstrate proficiency in statistics and may do so by completing Educational Foundations 452.

Before students may take courses to meet the field work requirement, they must be approved candidates, have completed 18 units of work at Cal State L.A., be recommended by their adviser, and be reapproved by the committee for their option. Electives are included within option programs. There is a limit on credit which may be earned in variable-unit courses. See page 313.

Most students are expected to take the comprehensive examination. Students who wish to write a thesis must demonstrate high academic ability as needed for significant independent study and must be recommended by faculty members on the basis of superior facility in statistics and research methods. A preliminary thesis proposal, approved by the candidate's adviser, must be submitted to the department research committee.

Required Core Program

The 27 units of required courses in the core program are as follows:

In Educational Guidance:

- 405AB Theoretical and Developmental Aspects of Behavior (4-4)
- 430 Test Construction (3)
- 445 Developmental Self Exploration (1)
- 450 Counseling Theory (3)
- 503 Sociological Factors in Counseling (4)
- 550 Individual Counseling Methods (4)

In Educational Foundations:

- 509 Methods of Research in Education (4)

Comprehensive Exam or Thesis/Project (0 or 7 units):

Comprehensive Examination

or

599AB Thesis or Project (7)

Students selecting the comprehensive examination should expect to take it in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Option in School Counseling

This area of specialization is recommended for those who plan to perform pupil personnel services in elementary or secondary schools. Preparation for consulting, counseling, coordination, and administration of pupil personnel services is emphasized.

Requirements for the option are as follows:

In Educational Guidance (54-60 units):

- 446 Occupational Analysis (3)
- 460 Laws Relating to Children (4)
- 501 Behavior Management in Schools (4)
- 502 Advanced Behavioral Methods in Schools (4)
- 529 Educational-Vocational Testing in Counseling (4)
- 531AB Individual Testing (4-4)
- 532 Diagnosis of Learning Problems and Remedial Procedures (4)
- 551 Group Counseling Methods (4)
- 570 Practicum: School Counseling (2)
- 581 Seminar: Pupil Personnel Services (4)
- 582 Seminar: Counseling (4)

May be substituted by second section of 550

586CO Supervised Field Work (6-12)

In Special Education:

- 510 Resource Specialist in Schools (4)

Electives (3-9 units):

Select courses as needed to fulfill 90-unit minimum required for the degree.

Candidates with three years of public school counseling or teaching experience are required to have 240 clock hours (6 units) of Educational Guidance 586. Other candidates are required to complete 480 clock hours (12 units).

Students may obtain an elementary or secondary school emphasis for the degree program with careful course selection and planning with their university advisers.

Option in Community College Counseling

The option in Community College Counseling is designed for preparation as student personnel specialists. While emphasis is placed on the counseling function, attention is given also to other student services customarily offered in the public community college.

Requirements for the option are as follows:

Required Courses (45-51 units):

In Educational Guidance:

- 446 Occupational Analysis and Information (3)
 - 510 The Community College Student (4)
 - 529 Educational-Vocational Testing in Counseling (3)
 - 530 Clinical Testing in Counseling (3)
 - 532 Diagnosis of Learning Problems and Remedial Procedures (4)
 - 538 Seminar: Methods of Vocational Assessment (4)
 - 551 Group Counseling Methods (4)
 - 570 Practicum in School Counseling (2)
 - 581 Seminar: Pupil Personnel Services (4)
- or
- 587 Seminar: Community College Student Personnel Services (4)

582 Seminar: Counseling (4)

586CC Field Experience in Counseling (6-12)

In Secondary Education:

- 581 The Community College (4)

Electives:

Courses selected with approval of adviser, as required to remedy deficiencies.

Option in Rehabilitation Counseling

The rehabilitation counselor is concerned with the vocational and personal potentialities of handicapped persons and problems involved in realizing them. These problems may be psychological, social, medical, and economic. Counselors must be knowledgeable in each of these areas in order to carry on their main function of helping their clients toward a satisfactory work adjustment.

Requirements for the option are as follows:

Required in Educational Guidance (48-54 units):

- 446 Occupational Analysis and Information (3)
- 467ABC Medical Aspects of Disability (3-3-3)
- 515 Principles of Rehabilitation (3)
- 516 Organization of Rehabilitation Services (3)
- 517 Transitional Work Programs in Rehabilitation (3)
- 518ABC Psychological and Social Aspects of Disability (2-2-2)
- 530 Clinical Testing in Counseling (3)
- 538 Seminar: Methods of Vocational Assessment (4)
- 551 Group Counseling Methods (3)
- 571 Practicum: Rehabilitation Counseling (1)
- 584 Seminar: Rehabilitation Counseling (2)
- 588 Supervised Practice in Rehabilitation Counseling (14)

Electives:

Courses selected with approval of adviser, as required to remedy deficiencies.

Courses in Educational Guidance

Graduate Courses

Classified graduate standing required for admission, except for maximum of 8 units specifically recommended for a credential.

501 Behavioral Contingency Management in Schools (4)

Prerequisite: Classified graduate standing or teaching credential. Application of behavioral contingency management procedures by school personnel.

502 Advanced Behavioral Contingency Management in Schools (4)

Prerequisites: Educational Guidance 501 and consent of instructor. Behavioral research, ethics, and recent developments in applying behavioral procedures to school and consulting relationships.

503 Sociological Factors in Counseling (4)

Effect of social environment on behavior; analysis of social processes that interrelate individuals and groups; relationship of counseling to behavioral sciences.

510 The Community College Student (4)

Prerequisite: Secondary Education 581 or consent of instructor. Characteristics and problems of community college student, impact of college life on individual, psycho-social aspects of student culture and community college environment.

515 Principles of Rehabilitation (3)

Historical, legislative, and administrative aspects of rehabilitation.

516 Organization of Rehabilitation Services (3)

Prerequisite: Educational Guidance 515 recommended. Community organization for rehabilitation, rehabilitation services and facilities, professional personnel providing rehabilitation services; overview of knowledge and skills needed by rehabilitation counselor; observation in selected community agencies.

517 Transitional Work Programs in Rehabilitation (3)

Prerequisite: Consent of instructor; Educational Guidance 515, 516 recommended. Programs of work therapy in hospitals and other rehabilitation settings, with special attention to work programs in sheltered workshops; transition to competitive employment.

518ABC Psychological and Social Aspects of Disability (2-2-2)

Prerequisites: Educational Guidance 405AB and admission to Rehabilitation Counseling program or consent of instructor. Social and psychological phenomena associated with physical and mental disability, behavior patterns and disorders, basic mechanisms and their relationship to recovery, effect on social and self-image of disability.

529 Educational-Vocational Testing in Counseling (3)

Prerequisite: Educational Guidance 430. Administration and interpretation of commonly used tests in educational and vocational counseling, evaluation and use of such tests in counseling. Students required to self-administer tests.

530 Clinical Testing in Counseling (3)

Prerequisites: Educational Guidance 430, 450 and 529 or equivalent. Underlying theories, administration and interpretation of commonly used objective and projective personality tests. Lecture 2 hours, laboratory 3 hours.

531AB Individual Testing and Case Study Techniques (4-4)

Also listed as Psychology 531AB

Prerequisites: Psychology 430 and one of following sequences: 410AB and 438; 410AB and 431; 418AB and 431. Intensive practice in administration and interpretation of better known testing devices for mental ability, perceptual and motor functioning, and personality dy-

namics, with attention to integration of results in case studies. Lecture 3 hours, laboratory 3 hours.

532 Diagnosis of Learning Problems and Remedial Procedures (4)

Prerequisites: Educational Guidance 430 and either 530 or 531B, or equivalent. Methods used by classroom teachers and school specialists in diagnosis and remediation of learning disabilities.

533 Psychological Testing Applied to Mentally, Physically Atypical (4)

Also listed as Psychology 533

Prerequisites: Educational Guidance 531AB or equivalent. Selection, administration, and interpretation of tests used for appraising the atypical individual. Lecture 3 hours, laboratory 3 hours.

534 Methods of Personality Assessment (4)

Also listed as Psychology 534

Prerequisite: Educational Guidance 531AB. Study and evaluation of current personality tests; objective and projective. Administration, scoring, interpretation, and reporting of results; findings of empirical research. Lecture 3 hours, laboratory 3 hours.

538 Seminar: Methods of Vocational Assessment (4)

Prerequisites: Educational Guidance 445 and 530 or equivalents. Use of statistical and clinical methods as basis for vocational appraisal in counseling; emphasis on individual case report.

550 Individual Counseling Methods (4)

Prerequisites: Educational Guidance 405AB, 450, 570 and consent of adviser and instructor. Techniques of individual counseling that apply to specific setting or derive from specific theory of counseling. May be repeated for credit as subject matter changes. Lecture 3 hours, laboratory 3 hours.

551 Group Counseling Methods (4)

Prerequisites: Educational Guidance 405AB, 430, 445, 450, 503, and 570. Analysis of functions of individual group members, the group as a whole, and reviews of related research and theory; practice and evaluation of human relations skills in small groups. Includes family counseling and group guidance. Lecture 3 hours, laboratory 3 hours.

Vocational Guidance Workshop (4)

Prerequisites: Admission to counselor training program or employment as counselor. Workshop integrating supervised employment experience in business and industry with development and evaluation of occupational information.

570 Practicum: School Counseling (2)

Prerequisite: Admission to a degree or credential program or employment as a counselor; Educational Guidance 450 recommended to be taken concurrently. Practical experience preparatory to working with clients; experiences designed to develop student's sensitivity to personal values and needs, and their significance in counseling process. Graded CR/NC only.

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571 Practicum: Rehabilitation Counseling (1)

Prerequisites: Admission to Rehabilitation Counseling option and consent of instructor. Beginning practical experience preparatory to actual work with clients. Variety of clinic and community experiences to develop skills and understanding of self and clients. Graded CR/NC only.

581 Seminar: Pupil Personnel Services (4)

Prerequisites: Educational Guidance 503 and consent of instructor. Organization, administration and evaluation of pupil personnel services in public elementary and secondary schools or in community colleges.

582 Seminar: Counseling (4)

Prerequisites: Educational Guidance 538 and 551 or equivalent. Intensive student involvements with counseling case data. Students do counseling, bring tapes and all case data to class with write-ups for extensive class discussion.

584 Seminar: Rehabilitation Counseling (2)

Corequisite: Educational Guidance 588. Systematic case studies drawn from supervised practice in counseling. Each student required to present one case study to seminar and, following group criticism, submit written report of case. May be repeated to maximum of 6 units.

585 Seminar: School Psychology (4)

Prerequisite: Consent of instructor. Current educational approaches to children with learning and developmental

problems; observation, discussion, and study of these approaches.

586 Supervised Field Experience In Pupil Personnel Services (2-12)

Prerequisite: Admission by application filed with department by fifth week of preceding quarter. Supervised field experience in school counseling, community college counseling, or school psychology involving work with pupils, parents, teachers, administrators, community agencies, and others. Graded CR/NC only. Candidates for Services Credential with a specialization in Pupil Personnel Services will enroll in an appropriate field experience as follows:

586CC Field Experience in Community College Counseling

586CO Field Experience in School Counseling

586SP Field Experience in Psychometry and School Psychology

587 Seminar: Community College Student Personnel Services (4)

Prerequisites: Educational Guidance 503 and consent of instructor. Examination and investigation of critical issues in community college personnel work. Seminar reports required.

588 Supervised Practice in Rehabilitation Counseling (2-14)

Prerequisites: Educational Guidance 571 and consent of instructor. Educational Guidance 584 must be taken concurrently. Supervised professional experience. One unit requires 40 hours of practice. Graded CR/NC only.

Library Science

The Library Services credential program authorizes service as a school librarian in both elementary and secondary schools, and is approved by the Commission for Teacher Preparation and Licensing.

Courses in Library Science are taught in the School of Education. The faculty for this post-baccalaureate program is provided by the School of Education, the Department of English, the John F. Kennedy Memorial Library and school libraries, with Marilyn W. Greenberg, Assistant Professor of Education, serving as Coordinator.

Admission to the Program

In addition to University requirements for admission to post-baccalaureate study, applicants must have a valid California teaching credential or be enrolled in a teaching credential program, file a program application, and be interviewed by the program coordinator.

Requirements for the Credential

The Library Services Credential requires 45 units of course work.

Required in Library Science (29 units):

- 400 Selection and Acquisition of Instructional Materials (4)

- 401 Principles of School Library Media Services (4)
- 402 Cataloging and Classification of Instructional Materials (4)
- 406 Basic Reference Materials and Services (4)
- 408 Bibliography (4)
- 450 School Librarian: Media Specialist Fieldwork (6)
- 451 Seminar: School Library Services (3)

Required in Secondary Education (8 units):

- 451 Instructional Media Techniques (4)
- 553 Administration of Instructional Media Services (4)

Required in English (8 units):

- 430 Children's Literature (4)
- 432 Literature in the Secondary School (4)

Reading

Two programs designed to provide proficiency in the specialized teaching of reading are offered. The Master of Arts degree option in Reading satisfies content requirements for reading specialists established by the International Reading Association. The Reading Specialist Credential program satisfies the requirements established by the Commission for Teacher Preparation and Licensing.

The Faculty

The faculty for this post-baccalaureate program is provided by several departments of the School of Education, with Constance E. Amsden, Professor of Education, serving as Coordinator.

Admission to the Programs

In addition to the University requirements for admission to classified graduate standing, students must have a 2.75 g.p.a. in the last 90 quarter units, must have a teaching credential, and must have completed a basic course in reading (Elementary Education 400 or Secondary Education 423 or equivalent). Specialist credential applicants must have completed the basic course after September, 1973, or have passed the Teaching of Reading Examination required by the Commission for Teacher Preparation and Licensing at the level specified by the Commission. Two years of teaching experience are recommended for degree candidates; credential candidates must verify completion of intensive and extensive classroom teaching experience.

Master of Arts Degree Option in Reading

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required. All students must pass a comprehensive examination or submit a thesis or project.

Required in Education (16-18 units):

- 435 Diagnosis and Remedial Reading Procedures (5)
- 524 Diagnosis and Remedial Reading Procedures for Clinicians (5)
- 540 Clinical Procedures in Reading (4-6)
- 541 Fieldwork in Reading (2)

Required in Educational Foundations (4 units):

- 500 Evaluation of Educational Research (4)
- or

- 509 Methods of Research in Education (4)

Required in Elementary Education (7 units):

- 411 Current Issues and Trends in Reading (4)
- 511 Seminar: Research in Teaching Elementary School Reading (3)

Electives (2-4 units):

Select one from following:

In Special Education:

- 400 Education and Psychology of Exceptional Individual (4)

- 420 Implications of Communication Handicaps (4)

- 462 Survey of Physical Defects (3)

- 465 Introduction to Vision (3)

- 524 Language Development for Hearing Handicapped Child: A Structural Approach (4)

In Educational Guidance:

- 483 Elementary School Guidance (4)

- 532 Diagnosis of Learning Problems and Remedial Procedures (4)

In Audiology:

- 400A Hearing Science (2)

Additional Electives (12-16 units):

Select from following with approval of adviser.

In Education:

- 449 Developing Reading Skills in Bilingual/Cross-cultural Individuals (4)
- 560 Principles and Practices of Curriculum Development (5)

In Educational Foundations:

- 409 Tests, Measurements and Evaluation (4)
- 452 Statistics in Education (4)
- 510 Advanced Educational Psychology (4)
- 530 Advanced Study in Child Development (4)

In Elementary Education:

- 412 Word Perception Skills (4)

In Educational Guidance:

- 483 Elementary School Guidance (4)
- 501 Behavioral Contingency Management in Schools (4)

In Special Education:

- 405AB Theoretical and Developmental Aspects of Behavior (4-4)

In English:

- 401 English Language in America (4)
- 406 Advanced Writing (4)
- 430 Children's Literature (4)
- 432 Literature in the Secondary School (4)

In Psychology:

- 412AB Psychology of Human Development (4-4)
- 418AB Personality: Theory and Research (4-4)
- 420 Psychology of Communications (4)
- 422 Social Psychology (4)

In Speech Communication:

- 456 Development of Verbal Behavior in Early Childhood (4)

- 461 Descriptive Phonetics (4)
 494 Speech Communication Behavior in Early Childhood (4)

In Speech Pathology:

- 434 Speech Disorders (4)

Comprehensive Exam or Thesis/Project (0 or 7 units):
 Comprehensive Examination

or
 599AB Thesis or Project (7)

Students selecting the comprehensive examination should expect to take it in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Reading Specialist Credential

Admission to the Program

In addition to the general requirements for graduate study, applicants must meet the conditions for classified graduate standing and must meet the following criteria: (1) have completed Elementary Education 400 or Secondary Education 423 after September 15, 1973 or have passed the Teaching of Reading Examination required by the Commission for Teacher Preparation and Licensing at a level specified by the Commission; (2) have verified completion of intensive and extensive successful teaching experience in the classroom through recommendation from school administrators; and (3) possess at least a California preliminary Multiple Subjects or Single Subjects Teaching Credential or its equivalent.

Requirements for the Credential

Fifty-one units of course work are required, of which 43 are applicable to the Master of Arts degree option in Reading. Students are advised to enroll in both programs concurrently for maximum benefit to their professional interests.

Required in Education (28 units):

- 435 Diagnosis and Remedial Reading Procedures for Classroom Teachers (5)
 449 Reading Skills in Bilingual/Cross-cultural Individuals (4)
 524 Diagnosis and Remedial Reading Procedures for Clinicians (5)
 538 Advanced Design and Evaluation of Reading Programs (4)
 540 Clinical Procedures in Reading (4)
 541 Field Work in Reading (6)

Required in Educational Foundations (8 units):

- 500 Evaluation of Educational Research (4)
or
 509 Methods of Educational Research (4)
 510 Advanced Educational Psychology (4)

Required in Elementary Education (11 units):

- 411 Current Issues and Trends in Reading (4)
 412 Word Perception Skills (4)
 511 Seminar: Research in Teaching Elementary School Reading (3)

Required in English (4 units):

- 400 Introduction to Linguistics (4)
or
 401 English Language in America (4)

Secondary Education

The Department of Secondary Education offers courses appropriate for pre-service and in-service preparations of teachers in the secondary schools, and programs of directed teaching for candidates for the teaching credential with authorization in single-subject instruction. The teaching credential program is described in the *Undergraduate Programs* section.

Master's degree programs related to secondary school teaching include options in Secondary Teaching, Reading and Area of Special Interest for the Master of Arts in Education, and the master's degree in subject fields taught in secondary schools.

Master of Arts Degree Option in Secondary Teaching

The M.A. degree option in Secondary Teaching is designed to provide a comprehensive background in the basic fields affecting the candidate's competency in secondary teaching. Students in this option select one of the following areas of concentration: (1) Adult Education, (2) Instruction, (3) Instructional Media, (4) Reading.

Admission to the Program

In addition to the University requirements for admission to graduate study, applicants must possess a 2.75 g.p.a. in the last 90 quarter units.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, and a comprehensive examination or a thesis or project pertaining to the area of concentration, are required. Prior to the award of the M.A. degree, students must have earned a credential and possess teaching experience approved by the Department of Secondary Education. There is a limit on credit which may be earned in variable-unit courses. See page 313.

Required Courses (8 units):

In Educational Foundations:

500 Evaluation of Educational Research (4)

or

509 Methods of Research in Education (4)

In Secondary Education:

595 Seminar: Metropolitan Secondary Education (4)

Electives in Education (12 units):

Select three from following:

In Secondary Education:

423 Teaching Reading in Metropolitan Secondary Schools (4)

Required for Reading Concentration below

451 Introduction to Instructional Media Techniques (4)

521 Seminar: Analysis, Interpretation of Instructional Behavior in Metropolitan Schools (4)

591 Problems of Metropolitan Secondary School Students (4)

Comprehensive Exam or Thesis/Project (0 or 7 units):

Comprehensive Examination

or

599AB Thesis or Project (2, 5)

Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Area of Concentration (18–25 units):

Select one of following areas.

ADULT EDUCATION

Required in Secondary Education (12 units):

471 Methods and Materials of Adult Education (3)

472 Principles of Adult Education (3)

476 Curriculum Construction for Adult Classes (3)

478 Organization, Administration, and Supervision of Adult Education (3)

Approved Electives (6–13 units):

Select with approval of adviser.

INSTRUCTION

Electives (15–17 units):

Select four from following:

In Education:

539 Seminar: Instructional Strategies for Inner City Schools (4)

In Educational Foundations:

437 Education and Intergroup Relations (4)

506 Comparative Education (4)

In Secondary Education:

425 Teaching of English as a Second Language (5)

454 Instructional Technology and Programmed Instruction (4)

491 Problems of Junior High and Middle Schools in Metropolitan Areas (4)

520 Evaluation of Teaching Competencies in Metropolitan Schools (4)

581 The Community College (3)

Approved Electives (1–10 units):

Select with approval of adviser.

INSTRUCTIONAL MEDIA

Electives (13–15 units):

Select four from following:

In Secondary Education:

450AB Instructional Materials Preparation Laboratory (1-1)

454 Instructional Technology and Programmed Instruction (4)

- 551 Advanced Audiovisual Techniques (3)
 553 Administration Instructional Media Services (4)
In Broadcasting:
 401 Informational and Educational Broadcasting (4)
Additional Electives (3–12 units):
 Select with approval of adviser.

READING

Students selecting the Reading Concentration must include Secondary Education 423 in basic electives listed above.

Required in Education (12 units):

- 435 Diagnosis and Remedial Reading Procedures for Classroom Teachers (5)
 524 Diagnosis and Remedial Reading Procedures for Clinicians (5)
 540 Clinical Procedures in Reading (2)

Additional Requirement (2–6 units):

Thesis candidates select one of following, in consultation with adviser; others enroll in both.

In Education:

- 540 Clinical Procedures in Reading (2)

In Elementary Education:

- 412 Word Perception Skills (4)

Approved Electives (4–7 units):

Select with approval of adviser.

Community College Instructor Credential

Requirements for the Community College Instructor Credential are set by the Board of Governors of the California Community Colleges. Details of these requirements and of a program in professional education for those interested in community college teaching may be secured from the Coordinator for Community College Education.

Courses in Secondary Education

Graduate Courses

Classified graduate standing required for admission, except for maximum of 8 units specifically recommended for a credential.

520 Evaluation of Teaching Competencies in Metropolitan Schools (4)

Prerequisite: Two or more years of teaching experience or consent of instructor. Emphasis on identification of teaching competencies of prospective and practicing teachers, procedures for assessment and improvement of competencies, and program implications for pre-service and in-service education of metropolitan teachers.

521 Seminar: Analysis, Interpretation of Instructional Behaviors for Metropolitan Teachers (4)

Prerequisites: Educational Foundations 500, teaching credential, and one or more years of teaching experience. Analysis of instructional activities and corresponding teaching behaviors; relevance of observation systems and research findings to instructional effectiveness; exploration of influence of teaching behaviors on student response.

523 Current Procedures and Materials in Teaching Secondary School Subjects in Metropolitan Community (4)

Prerequisite: Secondary Education 421 and teaching experience, or consent of instructor. Analysis and evaluation of current problems and trends in teaching secondary school subject fields; review and interpretation of current research; investigation of new materials and approaches.

523Ma Current Procedures and Materials in Teaching Mathematics (4)

523SS Current Procedures and Materials in Teaching Social Studies (4)

551 Advanced Audiovisual Techniques (3)

Prerequisite: Teaching experience or consent of instructor. Critical analysis of principles of selection and use of visual, auditory, and other sensory materials in education; limitations and practicality of use.

553 Administration of Instructional Media Services (4)

Prerequisites: Secondary Education 451, 551, and teaching experience or consent of instructor. Organization and administration of audiovisual services; practices and trends in reference to operational problems, budgeting, evaluation and procurement of equipment and materials, personnel, and physical facilities.

581 The Community College (3)

Prerequisite: Consent of instructor. History, aims and functions, organization, and curriculum of community colleges, with particular emphasis upon current issues emerging patterns in urban California colleges.

582 Instruction in Community College (4)

Prerequisite: Completion or near-completion of master's degree and consent of instructor. Specific preparation for directed teaching. Multi-purposes of the community college, community relationships and materials; organization, personnel relationships; qualifying for and securing employment.

589 Directed Teaching in Community College (6)

Prerequisites: Secondary Education 582 and approval of coordinator for community college education. Directed teaching in a community college for selected students holding master's degrees. Graded CR/NC only.

591 Problems of Metropolitan Secondary School Students (4)

Prerequisites: Secondary credential and secondary teaching experience, or consent of instructor. Consideration of typical and special problems of adolescents, with emphasis on their perception of such problems; investigation of selected aspects of adolescent attitudes, interests, and behavior.

595 Seminar: Metropolitan Secondary Education (4)

Prerequisite: Consent of instructor or completion of or concurrent enrollment in final units of program for Master of Arts degree option in secondary teaching. Identification and analysis of persistent problems as they affect metropolitan secondary education.



Special Education

Curricula in Special Education are designed to prepare personnel for delivery of educational service to individuals who deviate in physical, behavioral, and mental characteristics to the extent that they require special instruction or special services. Specialized preparation is offered for teachers of these exceptional individuals, for speech and hearing specialists, and for administrators and supervisors of special education programs.

The graduate program in Special Education provides two Master of Arts degrees, and a Ph.D. degree offered jointly with the University of California, Los Angeles. The M.A. program provides options in Special Education and in Speech Pathology and Audiology. For the latter degree, offered jointly with the Department of Speech Communication and Drama, a concentration may be taken in Audiology or in Speech Pathology; a program may be selected which combines study in both areas rather than a concentration in either.

Advisement

Students should seek advisement for all credential and graduate programs in Special Education, except Speech and Hearing, and Aphasic and Severely Oral Language Handicapped, through the Department of Special Education. Advisement for Speech and Hearing is provided by the Department of Speech Communication and Drama.

Master of Arts Degree

Option in Special Education

The Master of Arts degree option in Special Education is intended to prepare administrators, teachers, and therapists for work with exceptional learners. Candidates for a master's degree must incorporate as part of their program the requirements for a credential in their area of specialization. The program is planned with sufficient flexibility to accommodate it to the candidate's particular needs. Areas of specialization include:

- Communication Handicapped
- Physically Handicapped
- Learning Handicapped
- Severely Handicapped
- Gifted
- Administration and Supervision of Special Education (*offered in cooperation with Department of Administration and Supervision*)
- Resource Specialist in Special Education
- Orientation and mobility

Admission to the Program

In addition to the University requirements for admission to graduate study, applicants must have a 2.75 g.p.a. in the last 90 quarter units, must have completed the requirements for a California credential in Special Education and all de-

partmental application procedures, and must have obtained approval of the department.

Requirements for the Degree

A total of 45 units, including at least 23 units of 500-level courses, and a comprehensive examination or thesis, are required. Students may pursue thesis option only when they meet specified departmental and school criteria. There is a limit on credit which may be earned in variable-unit courses. See page 313.

Required in Special Education (11 units):

- 400 Education and Psychology of Exceptional Individual (4)
- 500 Seminar: Special Education (4)
- 501 Problems and Practices in Special Education (3)

Core Area and Electives (27-34 units):

Courses must be approved by adviser, and will include a graduate course, credential requirements in the candidate's field of specialization, and two courses outside the field. Fifteen units of credential courses within the candidate's field of specialization, exclusive of Special Education 400, may be applied toward the master's degree if taken in graduate standing. Advisement material concerning additional courses in each area of specialization is available in the department advisement office.

Comprehensive Exam or Thesis/Project (0 or 7 units):

Comprehensive Examination

or

599AB Thesis or Project (2, 5)

Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and department requirements.

Program Areas

Programs for all Special Education Specialist areas defined by the Teacher Preparation and Licensing Act of 1970 have been approved for offering at Cal State L.A. Options available under previous legislation are available to qualified students who can complete requirements by September 15, 1976.

Three basic patterns of special education credential programs currently are being offered, as follows:

Option A: Special Education Specialist Credential

This program must be followed by those who possess or are earning concurrently a multiple or single subject teaching credential. The option also is available to those who possess or can qualify for a basic teaching credential authorized under previous legislation. Areas of Special Education preparation under this option are:

Communication Handicapped: Speech and hearing, aphasic and severely oral language handicapped, deaf and severely hard of hearing and deaf-blind.

Physically Handicapped: Blind and partially seeing and orthopedically handicapped, including crippled and other health impaired.

Learning Handicapped: Learning disabilities, behavior disorders, and educationally retarded.

Severely Handicapped: Trainable mentally retarded, severely multiple handicapped, seriously emotionally disturbed, and autistic.

Gifted.

Option B: Specialized Preparation Minor.

This program, available only to students who possess or can qualify for a basic teaching credential authorized by legislation prior to Teacher Preparation and Licensing Act of 1970, is being phased out. It is described only in previous issues of the *General Catalog*.

Departmental approval must be obtained for entry into this option.

Areas of specialization are as follows:

Deaf and Severely Hard of Hearing

Mentally Retarded (EMR and TRM)

Orthopedically Handicapped

Visually Handicapped

Supervision of Special Education

Option C: Restricted Credential

This program is open only to students who qualify under provisions of pre-1970 legislation. This credential authorizes service only in the following specific areas of preparation:

Deaf and Severely Hard of Hearing

Deaf-Blind

Mentally Retarded (Educable)

Mentally Retarded (Trainable)

Orthopedically Handicapped

Visually Handicapped

Orientation and Mobility for Visually Handicapped

Speech and Hearing Specialist

Admission to Credential Programs

In addition to formal admission to the School of Education credential program, students desiring to enter a credential program in Special Education must apply to the Department of Special Education. Application forms and information on procedures are available in the Department of Special Education office. Also see *Admission to Credential Programs and Directed Teaching*, pages 107 and 108.

Special Education Specialist Credential

The following requirements are subject to change without notice; students are advised to consult the department for current requirements.

1. Communication Handicapped Specialization

This specialization has three sub-areas of preparation, two offered by the Department of Special Education and one offered jointly with the Department of Speech Communication and Drama. The sub-area of Deaf and Severely Hard of Hearing requires completion of 60 units and the sub-area of Deaf-Blind requires 66 units. The sub-area of Speech and Hearing, Aphasic, and Severely Oral Language Handicapped requires completion of 109 units.

Requirements for the Specialization

Forty-eight of the units required for the sub-area of Deaf and Severely Hard of Hearing and the sub-area of Deaf-Blind are the same, and are as follows:

Required in Special Education (41 units):

- 400 Education and Psychology of Exceptional Individual (4)
- 401 Atypical Development in Exceptional Individuals (3)
- 402 Curriculum and Instructional Strategies for Handicapped Individuals (4)
- 403 Special Education Laboratory (5)
- 404 Teacher Guidance for Exceptional Individuals (2)
- 405 Career Preparation for the Handicapped (2)
- 407 Directed Teaching in Special Education (12)
- 420 Implications of Communication Handicaps (4)
- 521 Communication Skills for Deaf: Theory (5)

Required in Audiology (7 units):

- 406 Hearing Science and Measurement for Teachers of Hearing Impaired (4)
- 500B Amplification Systems: Auditory Trainers (3)

Additional requirements for the sub-area of Deaf and Severely Hard of Hearing are the following 12 units in Special Education:

- 408 Cognitive and Linguistic Processes in Exceptional Individuals (4)

- 522 Communication Skills for Deaf: Educational Planning (5)
 523 Communication Skills for Deaf: Research (3)
 Additional requirements for the sub-area of Deaf-Blind are the following 18 units:

In Special Education (10 units):

- 466 Beginning Communication for Vision-Impaired (3)
 530 Education of Deaf-Blind Children (3)
 531 Specialized Communication Systems for Teaching Deaf-Blind Children (4)

In Audiology (4 units):

- 430 Paracomunication Processes in Rehabilitation of Pre-Lingually Hearing Impaired (3)
 431 Laboratory: Paracomunication Processes (1)

In Related Field (4 units):

Select one of following:

In Special Education:

- 408 Cognitive and Linguistic Processes in Exceptional Individuals (4)

In Speech Pathology:

- 456 Development of Verbal Behavior in Early Childhood (4)

The 109 units required for the sub-area of Speech and Hearing, Aphasic, and Severely Oral Language Handicapped include 93 units of required courses and 10 units of electives.

Required in Speech Pathology (66 units):

- 434 Speech Disorders (4)
 435 Advanced Problems in Psychological Speech Disorders (3)
 436 Advanced Problems in Neuropathologies of Speech and Language (3)
 437 Advanced Problems in Voice and Articulation Disorders (3)
 445XYZ Observation in Speech Pathology (1-1-1)
 446 Diagnostic Procedures in Speech Disorders (3)
 447 Speech and Hearing Services in Public Schools (2)
 448 Clinical Practice in Speech Disorders (2)
 456 Development of Verbal Behavior in Early Childhood (4)
 461 Descriptive Phonetics (4)
 462AB Speech Science (2-2)
 534 Seminar: Speech Pathology: Voice Disorders (4)
 535AB Graduate Studies in Stuttering (3-3)
 536 Seminar: Neuropathologies of Speech (4)
 537 Seminar: Language Disorders of Children (4)
 538 Seminar: Speech Pathology: Articulation Disorders (4)
 546 Advanced Diagnostic Procedures in Speech Disorders (3)
 548 Advanced Clinical Practice in Speech Disorders (2)

Required in Audiology (19 units):

- 400AB Hearing Science (2-2)
 402 Principles of Audiology (4)
 403 Hearing for Speech (3)
 405 Speech and Language Development and/or Remediation - Hard of Hearing Child (3)
 420 Speechreading (3)
 429 Clinical Practice in Aural Rehabilitation (1)

Required in Related Fields (8 units):

Select one of following:

In Psychology:

- 412AB Psychology of Human Development: Childhood and Adolescence (4-4)

In Educational Guidance:

- 405AB Theoretical and Developmental Aspects of Behavior (4-4)

Electives (16 units):

Select courses in Audiology, Educational Guidance, Special Education, Speech Communication, and Speech Pathology with approval of adviser. At least 4 units must be taken in courses specific to the sub-area.

2. Physically Handicapped Specialization

This specialization has two sub-areas: Visually Handicapped Learner, which requires 56 units, and Orthopedically Handicapped Learner, which requires 53 units.

Requirements for the Specialization

Forty-three of the units required for the Visually Handicapped Learner and the Orthopedically Handicapped Learner sub-areas are the same, and are as follows:

In Special Education:

- 400 Education and Psychology of Exceptional Individual (4)
 401 Atypical Development in Exceptional Individuals (3)
 402 Curriculum and Instructional Strategies for Handicapped Individuals (4)
 403 Special Education Laboratory (5)
 404 Teacher Guidance for Exceptional Individuals (2)
 405 Career Preparation for Handicapped (2)
 407 Directed Teaching in Special Education (12)
 460 Psychological, Sociological and Vocational Implications of Physically Handicapped (3)
 461 Art, Music, and Recreation for Physically Handicapped (4)

Select one of following:

In Special Education:

- 408 Cognitive and Linguistic Processes in Exceptional Individuals (4)

In Speech Pathology:

- 456 Development of Verbal Behavior in Early Childhood (4)

Required in the sub-area of the Visually Handicapped Learner are an additional

13 units in Special Education, as follows:

- 465 Introduction to Vision (3)
 466 Beginning Communications for Vision-Impaired (3)
 467 Advanced Communications for Visually Handicapped (3)
 468 Adaptive Living Skills for Vision-Impaired (4)

Required in the sub-area of the Orthopedically Handicapped Learner are an additional 10 units, as follows:

In Special Education:

- 462 Survey of Physical Defects (3)

In Speech Pathology:

- 434 Speech Disorders (4)
 442 Speech and Language Problems of Neurologically Handicapped Children Including Cerebral Palsied (3)

3. Learning Handicapped Specialization

This specialization has no sub-area and requires completion of 44 units, as follows:

In Special Education:

- 400 Education and Psychology of Exceptional Individual (4)
- 401 Atypical Development in Exceptional Individuals (3)
- 402 Curriculum and Instructional Strategies for Handicapped Individuals (4)
- 403 Special Education Laboratory (5)
- 404 Teacher Guidance for Exceptional Individuals (2)
- 405 Career Preparation for Handicapped (2)
- 407 Directed Teaching in Special Education (12)
- 550 The Learning Handicapped Individual (4)

Select one of following:

In Special Education:

- 450 Educational and Vocational Implications of Retardation (4)

In Psychology:

- 406 Mental Retardation (4)

Select one of following:

In Speech Pathology:

- 434 Speech Disorders (4)
- 456 Development of Verbal Behavior in Early Childhood (4)

4. Severely Handicapped Specialization

This specialization has no sub-areas and requires completion of 48 units, as follows:

Required in Special Education (40 units):

- 400 Education and Psychology of Exceptional Individual (4)
- 401 Atypical Development in Exceptional Individuals (3)
- 402 Curriculum and Instructional Strategies for Handicapped Individuals (4)
- 403 Special Education Laboratory (5)
- 404 Teacher Guidance for Exceptional Individuals (2)
- 405 Career Preparation for the Handicapped (2)
- 407 Directed Teaching in Special Education (12)
- 480 Implication of Severely Handicapped (4)
- 481 Methods of Teaching Severely Handicapped (4)

Electives (8 units):

In Educational Guidance:

- Select one of the following:
- 403 Behavioral Intervention Strategies for Pre- and Primary-School Child (4)
- 501 Behavioral Contingency Management in the Schools (4)

Select one of following:

In Special Education:

- 408 Cognitive and Linguistic Processes in Exceptional Individuals (4)

In Speech Pathology:

- 456 Development of Verbal Behavior in Early Childhood (4)

To develop particular interests, the following courses are recommended as electives:

In Special Education:

- 450 Educational and Vocational Implications of Retardation (4)
- 462 Survey of Physical Defects (3)
- 503 Field Work in Special Education (3)

In Educational Guidance:

- 532 Diagnosis of Learning Problems and Remedial Procedures (4)

In Speech Pathology:

- 434 Speech Disorders (4)

In Psychology:

- 406 Mental Retardation (4)
- 410AB Abnormal Psychology (4-4)

5. Gifted Specialization

This specialization has no sub-areas and requires completion of 46 units, as follows:

Required in Special Education (38 units):

- 400 Education and Psychology of Exceptional Individual (4)
- 401 Atypical Development in Exceptional Individuals (3)
- 402 Curriculum and Instructional Strategies for Handicapped Individuals (4)
- 403 Special Education Laboratory (5)
- 404 Teacher Guidance for Exceptional Individuals (2)
- 407 Directed Teaching in Special Education (12)
- 440 The Gifted Individual I (4)
- 441 The Gifted Individual II (4)

Electives (8 units):

Select from the following:

In Special Education:

- 408 Cognitive and Linguistic Processes in Exceptional Individuals (4)
- 540 Affective Development of Gifted Individuals (4)

In Education:

- 494 Open Education (4)
- 526 Leadership Principles and Practices (4)
- 528 Creative Behavior: Development and Facilitation (4)

Administrative Services Credential

Admission to the Program

Admission to programs leading either to supervisory or administrative services credentials requires that the candidate be admitted to graduate study in the University. Program planning for credentials is provided for each student by the credential advisers who are members of the faculty in the Department of Educational Administration and the Department of Special Education.

Students desiring to enter this credential program must apply to the Department of Educational Administration. Applications and admission procedures may be obtained from that office.

SUPERVISION OF INSTRUCTIONAL PROGRAMS—SPECIALIZATION AREA— SPECIAL EDUCATION REQUIREMENTS FOR THE CREDENTIAL

- (1) A baccalaureate or higher degree from an institution approved by the Commission.
- (2) Possession of an appropriate valid California teaching credential.
- (3) Three years of successful full-time classroom teaching experience in the public schools, or in private schools of equivalent status, by the time of completion of other requirements.
- (4) Possession of a master's degree.
- (5) Completion of the professional education requirements listed below.

Professional Education Requirements

Required Courses (42–45):

In Educational Administration:

- 503 Basic Course in Educational Administration and Supervision (4)
- 506 Educational Leadership and Decision-Making (3)
- 509 Basic School Law and Finance (4)
- 512 Educational Management (3)

- 515 Social and Political Forces in Educational Administration (3)
- 518 Principles and Practices of Curriculum Development (3)
- 548 Seminar: Supervision of Instructional Programs (3 or 4)

In Special Education:

- 503 Fieldwork in Special Education (3)
- 585 Organization and Administration of Special Education Programs (4)

In Educational Foundations:

- 500 Evaluation of Educational Research (4)

Select three from following:

In Special Education:

- 602 Practicum: Program Development and Evaluation (2)

In Educational Administration:

- 525 Principles and Practices of Leadership (3)
- 527 Advanced Educational Management and Evaluation (3 or 4)
- 530 Seminar: Advanced Curriculum Development (3 or 4)
- 554 Seminar: Research and Development in Educational Administration (3)

Electives (0-3 units):

Select with approval of adviser to complete 45 units.

Doctor of Philosophy Degree in Special Education

A doctoral program in Special Education, offered jointly with the University of California, Los Angeles and California State University, Los Angeles, combines the unique resources of the two institutions. The program provides preparation for leadership positions in higher education and the public schools, as well as preparation for a career in scholarly research. The degree requires major work in Special Education and cognate work in another department. Advanced courses and research seminars supply technical background in the specialization in which students plan to do their dissertation. Practicum, field work, and/or internship assignments are planned on an individual basis.

Admission to the Program

To be considered for admission, students must meet the following requirements:

(1) Have completed a master's degree or the equivalent, either in Special Education, in an allied field, or in the cognate field in which they propose to work. If any aspect of such preparation is lacking, students will engage in studies to achieve the requisite background.

(2) Have passed such examinations as may be specified by the Committee on Graduate Degrees (currently, a minimum total score of 1,000 is required on the aptitude test of the Graduate Record Examination).

(3) Have a grade point average of at least 3.0 in all upper division work.

(4) Have maintained at least a 3.3 grade point average in all work completed since the bachelor's degree.

(5) Show evidence of research capabilities. A master's thesis or comparable research project may be acceptable.

(6) Complete sufficient course work to merit recommendation for admission by at least four resident graduate faculty members.

(7) Specify the foreign language in which examinations are to be taken.

The resident adviser on the campus where students initiate work will assist in preparation of materials for submission to the Joint Admissions Committee. Upon recommendation for consideration by the Joint Admissions Committee, students will be considered for admission by the Joint Doctoral Committee of Cal State L.A. and the UCLA Committee on Admissions and Standards.

Upon approval by the committees and the Deans of Graduate Study, applicants are notified of formal admission to the program.

Planning the Program

Upon formal admission, students pursue programs of study in both Special Education and the approved cognate area. Normally, doctoral students in Special Education are advised to seek their cognate area in the Department of Psychology on either campus.

The program is planned to provide a comprehensive understanding of the entire field of Special Education. The student's program is planned cooperatively with a designated guidance committee. In general, programs are designed to: (1) develop competence in statistics and research; (2) provide an understanding of research relating to exceptional children; (3) strengthen background through study in a cognate area; (4) provide electives to complete a balanced program of study. The program is not built around specific unit requirements, but will be designed to insure the candidate's competencies in the above areas.

Residency Requirements

All doctoral candidates are required to engage in six or more quarters of resident study; minimum requirement is three quarters on each campus. Normally the program may be expected to require more than minimum residency requirements. The exact distribution of time on each campus will be determined in consultation with the student's Joint Guidance Committee and will depend upon the program which is designed. Doctoral candidates must be enrolled in three of every four quarters unless on formal leave of absence.

Candidates are allowed a period of time not to exceed four years from the beginning of course work to advancement to candidacy, and four additional years from advancement to candidacy to completion of the dissertation.

Language Requirement

Candidates must select one language acceptable to the Guidance Committee and the Deans of the Graduate Divisions, and pass an examination which will test their ability to read and understand the written form of this language.

Qualifying Examinations

When the candidate has completed the course work recommended by the resident advisers, application is made for written qualifying examinations. There are three qualifying examinations: (1) the cognate examination, (2) the breadth examination, and (3) the major field examination. Upon successful completion of the written qualifying examinations, a Joint Doctoral Committee will be appointed by the Deans of the Graduate Divisions of the two institutions, composed of two approved members from the staff of the UCLA Department of Education, two from the staff of the Cal State L.A. Department of Special Education, one from the staff of the cognate department of UCLA and one from the cognate department at Cal State L.A. This committee will conduct an oral examination on topics from both Special Education and the cognate discipline related to the candidate's research proposal, to determine the candidate's qualifications to conduct meaningful research in the field.

Advancement to Candidacy

Candidates who have passed both the written and the oral qualifying examinations, as well as language requirement, file an application for advancement to candidacy. Thereafter, enrollment is required each quarter in Special Education 699, or for such course or courses as the student's committee chairman may direct, until the dissertation is completed.

Dissertation

The dissertation embodies the results of the candidate's independent investigation. It must contribute to the body of knowledge in the field and draw upon interrelations between education and the cognate discipline. The dissertation must be approved by the candidate's Joint Doctoral Committee and, after approval, copies must be filed in the libraries of both institutions. An abstract must be submitted to University Microfilms for publication in *Dissertation Abstracts*. Candidates should check with the committee chairman regarding the need for additional copies of the dissertation.

Final Examination

Candidates must pass a final oral examination

conducted by the Joint Doctoral Committee, with major emphasis on the interrelation of the dissertation to existing knowledge in education and in the cognate field. The major emphasis of this examination is on defense of the dissertation.

Advisement

A staff member is designated on each campus as Resident Doctoral Adviser for all students intending to apply for admission to the Joint Doctoral Program. As soon as the decision is made to seek admission, applicants should consult the adviser for assistance in planning the initial program and for advice on formal procedures required for consideration for admission to the program. Further information may be obtained from the *Student Procedural Handbook*.

The addresses and phone numbers for contacting the resident doctoral advisers are as follows:

Department of Special Education
California State University, Los Angeles
5151 State University Drive
Los Angeles, California 90032
King Hall, Room C1064
Phone: (213) 224-2741 or 224-3711

Graduate School of Education
University of California, Los Angeles
405 Hilgard Avenue
Los Angeles, California 90024
Phone: (213) 825-2621

Courses in Special Education

Graduate Courses

Classified graduate standing required for admission, except for maximum of 8 units specifically recommended for a credential.

500 Seminar: Special Education (4)

Prerequisite: Special Education 400. Study of research relating to psychological and educational problems of exceptional children, introduction to methodological problems in developing, conducting, and reporting research in special education.

501 Problems and Practices in Special Education (3)

Prerequisite: Special Education 400. Problems of organization, administration, and supervision of special educational programs; evaluation of recent proposed needed legislation; review of current literature. For advanced students and administrators.

502 Educational Measurements in Special Education (4)

Prerequisites: Educational Foundations 409, Special Education 400, and basic courses in student's special field. Interpretation and use of test and other measurements for study of the exceptional child. May not be substituted for the credential requirement of administration of individual psychological tests.

503 Field Work in Special Education (3)

Prerequisite: Consent of department. Supervised field training in problems relating to instruction, supervision, administration, evaluation, and guidance of exceptional children. Special assignments in schools, diagnostic centers and community agencies. May be repeated to maximum of 9 units.

504 Selected Studies in Special Education (3-5)

Prerequisite: Special Education 400 or consent of instructor. Intensive study of designated problems in special education. May be repeated for credit as subject matter changes.

510 Resource Specialist in Special Education (4)

Prerequisites: Two years of teaching experience and consent of instructor. Problems of serving individuals with exceptional needs in regular school program; consultation, in-service training, coordination of services for exceptional pupils.

520 Practicum in Deafness (4)

Prerequisite: Special Education 521 (may be taken concurrently). Supervised observation and participation in classes for deaf and severely hard of hearing; experience in diagnostic and tutoring activities with individual deaf children.

521 Communication Skills for Deaf: Theory (5)

Prerequisite: Elementary Education 400, 401, and 402 or Secondary Education 401AB, or consent of instructor. Instruction of the deaf; analysis of research in speech and language development, speech reading, auditory training, elementary school subjects; practical applications at preschool, primary, intermediate, and advanced levels.

522 Communication Skills for Deaf: Educational Planning (5)

Prerequisite: Special Education 521. Instruction of the deaf; analysis of research in speech and language development, speech reading, auditory training, elementary school subjects; practical applications at preschool, primary, intermediate, and advanced levels.

523 Communication Skills for Deaf: Research (3)

Prerequisite: Special Education 522. Methods of instructing the deaf. Research in speech and language development. Modification of elementary and secondary school subjects for hearing impaired.

524 Language Development of Hearing Handicapped Child: A Structural Approach (4)

Prerequisite: Teaching credential or consent of instructor. Review of existing structural approaches in deaf education; visual-kinesthetic-tactile representation of basic English sentence patterns for development and acquisition of language for linguistically handicapped child.

525 Language and Speech for Profoundly Deaf Child (4)

Prerequisite: Consent of instructor. Methods used in development and remediation of receptive and expressive language for profoundly deaf children of preschool, primary, and intermediate academic levels.

530 Education of Deaf-Blind Children (3)

Prerequisite: Special Education 400. Principles of working with deaf-blind children from preschool through elementary grades; adaptation of assessment techniques, methods, and materials; development of meaningful curriculum based upon individual needs.

531 Specialized Communication Systems for Teaching Deaf-Blind Children (4)

Prerequisites: Speech Communication 456, Audiology 430 and 431, Special Education 530. Adaptation and use of specialized oral and manual communication systems; techniques to develop cognitive growth and teach receptive and expressive language skills to deaf-blind children.

540 Affective Development of Gifted Child (4)

Prerequisites: Special Education 400, 440, and 441, or consent of instructor. Relationship of affective factors, e.g., receiving, responding, valuing, self concept of learner and teacher, to cognitive growth of gifted child. Emphasis on affective area applicable to all exceptionalities, as approached through current research related to gifted children.

550 The Learning Handicapped Individual (4)

Prerequisites: Teaching credential, Special Education 400, and consent of instructor. Problems of management and treatment of children with learning and behavior disorders; emphasis on learning problems, emotionality, organicity, and techniques in psycho-educational habilitation. Laboratory experience.

565 Advanced Problems in Education of Visually Handicapped (4)

Prerequisites: Completion of requirements for credential for teaching visually handicapped. May be taken concurrently with Special Education 407. Identification and analysis of problems and current issues relating to education of visually handicapped; review of recent research specifically related to visual impairment and its application to educational practice.

575 Supervised Field Training in Orientation and Mobility for Blind (5)

Prerequisites: Special Education 475 and 476. Open only to students in orientation and mobility training program. Clinical training in orientation processes and independent mobility techniques for blind; development and application of methods, materials, and individualized instructional units in meeting needs of the blind. Seminar 2 hours, supervised field training 9 hours.

576 Orientation and Mobility: Visually Impaired Multihandicapped Practicum (4)

Prerequisites: Special Education 475 and 476. Teaching orientation and mobility to visually impaired multihandicapped individuals, emphasizing modification of normal instructional strategies and techniques. Lecture 2 hours, field practicum 6 hours.

580 Biomedical Aspects of Mental Retardation (4)

Prerequisite: Psychology 406. Etiological and developmental aspects of mental retardation from biological and medical points of view.

581 Vocational Rehabilitation of Mentally Retarded (3)

Prerequisites: Psychology 406 (may be taken concurrently) and consent of instructor. Principles, problems and methods of vocational development; work evaluation and adjustment, job training, and placement of retarded youth and adults. Individual projects.

585 Organization and Administration of Special Education Programs (4)

Prerequisites: Consent of Departments of Special Education and Educational Administration. Planning and financing of special education programs. Organization of local, state, federal, and non-public agencies related to education of exceptional children.

*Doctoral Courses***600 Seminar: Current Issues in Special Education (2)**

Prerequisite: Post-master's degree standing. Current issues in special education, including educational trends, legislation, emphasis on research and ongoing school problems. Variable content; may be repeated for credit.

601 Practicum: College Teaching (2)

Prerequisites: Post-master's degree standing and concurrent enrollment in Special Education 600. Directed study of problems in higher education, supervised observation and teaching of college courses. May be repeated for credit.

602 Practicum: Program Development and Evaluation (2)

Prerequisite: Post-master's degree standing. Development of proposals and grant applications to federal, state, and private agencies for research, training, and public school program funding. May be repeated for credit.

640 Research in Education of Gifted (4)

Prerequisites: Special Education 400 and 440. Intensive study of current research on gifted, talented, and creative; factors in intellectual development; experimental school programs.

650 Learning Disorders of Children: Educational Theory and Research (4)

Prerequisites: Psychology 512 and consent of instructor. Extensive review of theories and research on learning in children in school-related tasks, with emphasis on incorrect, inconsistent and/or lack of performance leading to suspicion of learning disabilities.

680 Research in Education of Retarded Children (4)

Prerequisites: Psychology 406 and Special Education 450. Intensive review of research relating to learning patterns, curriculum design, and social adjustment of retarded children.

698 Graduate Directed Study (1-8)

Prerequisite: Consent of an instructor to act as sponsor. Independent directed study of advanced topics in field; regular conferences with sponsor. May be repeated for credit.

699 Doctoral Dissertation (4-8)

Prerequisites: Advancement to candidacy for Ph.D. degree, consent of an instructor to act as sponsor, and departmental approval of topic prior to registration. Continuous enrollment required while student is working on dissertation.

Audiology

This program is offered jointly with the Department of Speech Communication and Drama. The degree program in the Department of Special Education emphasizes Audiology; Speech Pathology is offered by the Department of Speech Communication and Drama. Students interested in pursuing a program in both areas should seek advisement through either of the departments.

Two programs are offered:

- (1) The Master of Arts degree in Speech Pathology and Audiology, Audiology Concentration. Students may emphasize either Clinical Audiology or Rehabilitative/School Audiology.
- (2) Certificate in Rehabilitative/School Audiology, which may be earned simultaneously with the master's degree.

The program in Audiology serves several major purposes:

- (1) To prepare students to serve as audiologists in clinical settings (M.A. with emphasis in clinical audiology).
- (2) To prepare students to serve as audiologists in the public schools (Certificate in Rehabilitative/School Audiology).
- (3) To prepare students to serve as audiologists in the public schools and in clinical settings (Certificate in Rehabilitative/School Audiology plus an M.A. with emphasis in Rehabilitative/School Audiology).
- (4) To provide the course work and clinical experiences leading toward the Certificate of Clinical Competence in Audiology offered by the American Speech and Hearing Association.
- (5) To provide specialized courses in the field of hearing for students preparing for a credential in the areas of speech and hearing, deaf and severely hard of hearing, and deaf-blind, and for those preparing for the public school audiometrist certificate.

Master of Science Degree, Audiology Concentration

Admission to the Program

In addition to the University requirements for admission to graduate study, applicants must have a 2.75 g.p.a. in the last 90 quarter units, a score of 400 on either the Verbal or Quantitative Aptitude Test of the GRE or a score of 36 on the Miller's Analogy Test, and either a Special Credential in Speech and Hearing or a bachelor's degree in Speech Pathology.

Students enrolled in a major other than Speech Pathology may shorten the time necessary to prepare for the M.A. degree by including in their

undergraduate programs the following courses: Audiology 400AB, 402, 403, 404, 405, 420, 429, 440, 441, and 444; Speech Pathology 434, 437, 456, 461, and 462AB; and either Audiology 423 or Speech Pathology 446.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses and a comprehensive examination, are required. There is a limit on credit which may be earned in variable-unit courses. See page 00.

Required in Audiology (22 units):

- 500A Amplification Systems: Hearing Aids (3)
- 501 Audiological Instrumentation (4)
- 503 Advanced Audiology: Conductive Lesions and Difficult to Test (3)
- 504 Advanced Audiology: Pseudohypoacusis (3)
- 505 Advanced Audiology: Special Tests for Site of Lesion (3)

Select 6 units from following:

- 529 Advanced Clinical Practice in Aural Rehabilitation (1-1)
- 541 Advanced Clinical Procedures in Hearing Evaluation (1-1-1)
- 543 Clinical Practice: Difficult-to-Test Children and Clients with Conductive Lesions (1)
- 544 Observation and Clinical Practice: Pseudohypoacusis (1)
- 545 Observation and Clinical Practice: Special Tests for Site of Lesion (1)

Electives (23 units):

In consultation with adviser, select additional courses in Audiology, Speech Pathology, or related courses, to complete 45 units and to meet requirements for the American Speech and Hearing Association for the Certificate of Clinical Competence in Audiology.

Comprehensive Examination:

Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Master of Science Degree, Speech Pathology Concentration

A total of 45 units, including at least 23 units in 500-level courses, is required for the master's degree with a concentration in Speech Pathology. For a description of the requirements for this program, see the Speech Pathology section of the Department of Speech Communication and Drama in the School of Letters and Science.

Certificate Program in Rehabilitative/School Audiology

This certificate is designed to meet the need for audiologists to serve in school systems. In general, an applicant for a position as a school audiologist will be expected to have an M.A. in Audiology or the equivalent and to have met the academic preparation requirements for the Certificate of Clinical Competence in Audiology of the American Speech and Hearing Association. A credential for school audiologists is anticipated in the near future; students should consult advisors in Audiology for its availability.

Admission to the Program

Formal admission to the program is obtained only at the graduate level, although 400-level courses in the program may be completed in undergraduate standing. Requirements for admission are the same as those for the Audiology option for the Master of Arts degree in Speech Pathology and Audiology.

Required Courses

A total of 90-92 units is required. Students are cautioned to read descriptions of all required courses for prerequisites and to complete such prerequisites before enrolling in advanced courses.

Required in Audiology (59 units):

- 400AB Hearing Science (2-2)
- 401 Observation in Audiology (1)
- 402 Principles of Audiology (4)
- 403 Hearing for Speech (3)
- 404 Auditory Processing and Development of Listening Skills (4)
- 405 Speech and Language Development and/or Remediation-Hard of Hearing Child (3)
- 420 Speechreading (3)
- 429 Clinical Practice: Aural Rehabilitation (1-1-1)
- 430 Paracommunication Processes in Rehabilitation of Pre-Lingually Hearing Impaired (3)
- 431 Laboratory: Paracommunication Processes (1)
- 440 Clinical Practice: Pure Tone Threshold and Screening Audiometry (1)
- 444 Clinical Practice: Auditory Processing and Listening Skills (1)
- 500A Amplification Systems: Hearing Aids (3)
- 500B Amplification Systems: Auditory Trainers (3)
- 501 Audiological Instrumentation (4)
- 502 Room Acoustics (2)

- 503 Advanced Audiology: Conductive Lesions and Difficult to Test (3)
- 504 Advanced Audiology: Pseudohypoacusis (3)
- 529 Advanced Clinical Practice: Aural Rehabilitation (1-1-1)
- 541 Clinical Practice: Hearing Evaluation (1-1-1-1)
- 542 Clinical Practice: Measurement of Electroacoustic Characteristics of School Auditory Training Systems (1)
- 543 Clinical Practice: Difficult-to-Test Children and Clients with Conductive Lesions (1)
- 544 Observation and Clinical Practice: Pseudohypoacusis (1)

Required in Speech Pathology (15 units):

- 437 Advanced Problems in Voice and Articulation Disorders (3)
- 456 Development of Verbal Behavior in Early Childhood (4)
- 461 Descriptive Phonetics (4)
- 462AB Speech Science (2-2)

Required in Special Education (11 units):

- 406 Observation in Special Education (1-1-1)
- 408 Implications of Communication Handicaps (4)
- 525 Language and Speech for Profoundly Deaf Child (4)

Additional Requirements (5-7 units):

Select one of following:

In Audiology:

- 423 Preclinical Procedures in Audiology (3)

In Speech Pathology:

- 446 Diagnostic Procedures in Speech Disorders (3)

Select one of following:

In Psychology:

- 436A Theory and Techniques in Counseling (4)

In Special Education:

- 404 Teacher Guidance for Exceptional Individuals (2)

Courses in Audiology

Graduate Courses

Classified graduate standing required for admission, except for maximum of 8 units specifically recommended for a credential.

500A Amplification Systems: Hearing Aids (3)

Prerequisite: Audiology 403; concurrent enrollment in 501 recommended. Physical and electroacoustic characteristics of hearing aids, adjustments for individual differences; assessment and selection procedures.

500B Amplification Systems: Auditory Trainers (3)

Prerequisite: Audiology 406. Evaluation, comparison, and use of auditory training systems. Lecture 2 hours, laboratory 3 hours.

501 Audiological Instrumentation (4)

Prerequisite: Audiology 441; concurrent enrollment in 500A recommended. Audiological instrumentation; calibration check of audiometers; maintenance and monitoring of testing and amplification equipment; electroacoustical measurement of hearing aids and portable auditory trainers. Lecture 2 hours, laboratory 6 hours.

502 Room Acoustics (2)

Prerequisite: Audiology 403. Measurement of room sound levels; acoustical conditions which affect learning environment of hearing-impaired pupils; assessment of classroom acoustical conditions and methods of improving substandard conditions.

503 Advanced Audiology: Conductive Lesions and Difficult-to-Test (3)

Prerequisite: Audiology 403. Tests appropriate for measuring degree of conductive deficit; laboratory practicum in use of these advanced tests. Techniques to be used in assessing peripheral hearing of difficult-to-test child. Lecture 2 hours, laboratory 3 hours.

504 Advanced Audiology: Pseudohypoacusis (3)

Prerequisites: Audiology 503 and Speech Pathology 461. Nature and psychology of pseudohypoacusis; critical evaluation of related research; experience in administering tests for non-organic hearing losses; examination of related aspects of medico-legal audiology. Lecture 2 hours, laboratory 3 hours.

505 Advanced Audiology: Tests for Site of Lesion (3)

Prerequisites: Audiology 503 and Speech Pathology 461. Theory, instruction, and practice in advanced audiometric procedures used in determining cause of hearing loss caused by sensory, neural, or central site of lesion. Lecture 2 hours, laboratory 3 hours.

520 Communicative Habilitation of Multiply Handicapped Pre-Lingually Hearing Impaired (3)

Prerequisites: Audiology 403 and 430, or consent of instructor. Theory, diagnostic methods, and clinical procedures in evaluation and communicative habilitation of multiply handicapped pre-lingually hearing impaired.

521 Laboratory: Communicative Habilitation (1)

Prerequisite: Concurrent enrollment in Audiology 520. Supervised clinical experience in evaluation and communicative habilitation of multiply handicapped pre-lingually hearing impaired. Group and individual therapy in communications skills laboratory. May be repeated to maximum of 6 units.

529 Advanced Clinical Practice in Aural Rehabilitation (1-3)

Prerequisite: Audiology 429. Advanced work in supervised clinical experience in diagnostic and rehabilitation techniques for children and adults with hearing loss. May be repeated to maximum of 6 units.

541 Advanced Clinical Procedures in Hearing Evaluation (1-3)

Prerequisite: Audiology 441 or consent of instructor. Advanced supervised clinical experience in diagnostic and rehabilitation techniques with children and adults who have hearing losses. May be repeated to maximum of 6 units.

542 Clinical Practice: Measurement of Electroacoustic Characteristics of School Auditory Training Systems (1)

Prerequisite: Audiology 501. Supervised clinical experiences in schools in measurement of electroacoustic characteristics and detection of mechanical defects in auditory training systems; written reports of findings and recommendations.

543 Advanced Clinical Practice: Difficult-to-Test Children and Clients with Conductive Lesions (1)

Prerequisites: Audiology 440 and 503. Clinical practice in testing clients with conductive lesions and children who are difficult to test.

544 Observation and Clinical Practice: Pseudohypoacusis (1)

Prerequisites: Audiology 504 and 543. Observation and supervised clinical practice in testing children and adults suspected of having pseudohypoacusis hearing losses or overlays.

545 Observation and Clinical Practice: Special Tests for Site of Lesion (1)

Prerequisites: Audiology 505 and 543. Observation and supervised clinical practice in testing children and adults suspected of having sensory-neural or central hearing losses.

595 Seminar: Hearing (4)

Prerequisites: Audiology 403 or consent of instructor. Review of current scientific studies of hearing and hearing problems; individual research project in area of student's interest.

Area of Special Interest

The Area of Special Interest option for the Master of Arts degree is designed for students with special needs not covered by other options in the master's degree program in Education. It permits flexibility and the opportunity to concentrate course work in an area of a particular research interest or a problem of immediate professional concern.

Students select appropriate courses in Education and any department which develops knowledge related to their interests. Illustrative areas include educational media, early childhood education, and adult education. Additional information is available from the coordinator, Associate Dean Carleton B. Shay, in the office of the School of Education. The faculty for this program is provided by the entire School of Education.

Admission to the Program

In addition to the University requirements for admission to graduate study, applicants must have had two years teaching experience or have completed 33 units of approved upper division courses in Education and related areas, and a 2.75 g.p.a. in the last 90 quarter units. Students must also meet proficiency standards as established by the School, and receive the approval of the Dean of the School of Education.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required. All students must complete a thesis or project structured around the area of special interest, for which 7 units are

earned toward degree requirements. There is a limit on credit which may be earned in variable-unit courses. See page 313.

Required in Educational Foundations (4 units):

500 Evaluation of Educational Research (4)

or

509 Methods of Research in Education (4)

Electives in Education (12–25 units):

Courses selected with approval of adviser to meet the special needs of students. Courses used to satisfy requirements for teaching credentials may not be used to satisfy this requirement.

Electives Outside Education (9–22 units):

Select with approval of adviser.

Thesis/Project (7 units):

599AB Thesis or Project (7)

School of Engineering

The objectives of the Master of Science degree programs in Civil, Electrical, and Mechanical Engineering are to prepare students for employment in design, research and development positions in industry, for positions as engineering teachers, and for further study toward doctoral degrees.

Admission to the Program

In addition to the University requirements for admission to graduate study, applicants must possess the equivalent of the Bachelor of Science degree currently specified by Cal State L.A. for the field of Engineering in which they wish to specialize.

Consultation with a department graduate adviser is required before any courses are attempted, to determine if deficiencies exist in undergraduate preparation. Students should provide transcripts of all undergraduate work, which will be retained by the adviser.

Requirements for the Degree

A total of 45 units, of which at least 24 must be 500-level, and either a thesis or comprehensive examination, are required.

Requirement in Mathematics

Mathematics 402A is required for all graduate programs if it was not taken as part of the undergraduate program.

Master of Science Degree in Civil Engineering

The advice and approval of a Civil Engineering graduate adviser must be obtained before enrolling in any course.

Area of Specialization (24–37 units):

Select a minimum of 24 units in 500-level Engineering courses. At least 20 units must be in Civil Engineering courses selected from the list which follows, must be in a coherent group of courses which will fulfill the student's objectives, and must have the approval of adviser and department chairperson.

- 502 Theory of Elasticity (4)
- 560 Structural Mechanics III (4)
- 561 Advanced Structural Design (4)
- 562 Reinforced Concrete Design II (4)
- 563 Matrix Computer Analysis of Structures (4)
- 564 Numerical Methods in Structural Analysis (4)
- 565 Dynamics of Structures (4)
- 566 Soil Mechanics II (4)
- 567 Foundations II (4)
- 569 Earth Structures (4)
- 570 Soil Dynamics (4)
- 572 Plates and Shells (4)
- 581 Hydrodynamics (4)
- 582 Statistical Hydrology (4)
- 583 Hydrology II (4)

585 Theory of Models (4)

586 Open Channel Hydraulics (4)

587 Hydraulics (4)

588 Hydraulic Structures (4)

589 Coastal Engineering (4)

Electives in Engineering (0–13 units):

Select from 400- and 500-level courses.

Electives in Related Fields (8–21 units):

Select minimum of 8 units, other than Civil Engineering, related to program. These usually are from Mathematics. Mathematics 402A satisfies 4 units of this requirement, if taken as part of master's program.

Comprehensive Exam or Thesis (0, 4 units):

Comprehensive Examination

or

599 Thesis (1-4)

Students selecting the comprehensive examination should expect to take it in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Master of Science Degree in Electrical Engineering

A minimum score of 400 on either the Verbal or quantitative tests and a minimum score of 500 on the Advanced Test in Engineering of the GRE are required.

The advice and approval of an Electrical Engineering graduate adviser must be obtained before enrolling in any course.

Area of Specialization (24–37 units):

Select a minimum of 24 units in 500-level Engineering courses; at least 16 units must be selected from following the Electrical Engineering courses:

- 530 Linear Systems Analysis (4)
- 531AB Principles of Communication Theory I,II (4-4)
- 532 Detection of Signals in Noise (4)
- 536ABC Solid State Electronics I,II,III (4-4-4)
- 537AB Microwave Electromagnetics (4-4)
- 538 Linear and Non-linear Control Systems Theory (4)
- 544 Digital Computer Design (4)
- 546 Solid State Electronics Laboratory (1)
- 547AB Computer System Architecture (4-4)
- 548 Sampled-Data and Digital Control Systems Theory (4)

Electives in Engineering (0–13 units):

Select from 400- or 500-level courses.

Electives from Related Fields (8–21 units):

Mathematics 402A satisfies 4 units of this requirement if taken as part of master's program. Typical courses are:

In Mathematics:

- 402B Advanced Mathematics II for Engineers and Physicists (4)
 474 Theory and Probability (4)
 580 Real Analysis (4)
 582 Advanced Complex Analysis (4)

In Physics:

- 426AB Electricity and Magnetism (3-3)
 510AB Mathematical Methods of Physics (4-4)

Comprehensive Exam or Thesis (0,4 units):

Comprehensive Examination

or

- 599 Thesis (4)

Students selecting the comprehensive examination should expect to take it in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Master of Science Degree in Mechanical Engineering

The advice and approval of a Mechanical Engineering graduate adviser must be obtained before enrolling in any course.

Area of Specialization (24-45 units):

Students must choose in advance a group of courses which fulfills their objectives. Approval of adviser and department chairperson is required. Suggested groupings of courses which cover programs in thermo-fluid systems design and mechanical systems design are available from advisers.

Select a minimum of 24 units in 500-level Engineering courses; at least 16 units must be selected from following list of Mechanical Engineering courses:

- 501 Advanced Mechanics of Mechanisms (4)
 502 Theory of Elasticity (4)
 503 Design of Mechanical Systems and Products (4)
 504 Thermal Radiation (4)
 505 Heat Conduction (4)
 506 Heat Convection (4)
 508 Compressible Fluids (4)
 509 Viscous Fluids and Boundary Layer Theory (4)
 511 Vibrational Analysis II (4)
 512 Advanced Topics in Thermodynamics (4)
 521 Advanced Controls of Mechanical Systems (4)

Electives (0-21 units):

Select from 400- and 500-level Engineering courses or from related fields, with approval of adviser.

Comprehensive Exam or Thesis (0,4 units):

Comprehensive Examination

or

- 599 Thesis (4)

Students selecting the comprehensive examination should expect to take it in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

- 401 Advanced Dynamics (4)
 402 Strength of Materials II (4)
 403 Aerodynamics (4)
 404 Principles of Turbomachinery (4)
 407 Introduction to Statistical Thermodynamics (4)
 408 Fluid Mechanics II (4)
 411 Vibrational Analysis I (4)
 412 Strength of Materials Laboratory II (1)
 413 Aerodynamics Laboratory (1)
 414 Machine Design II (4)
 415 Air Conditioning (4)
 416 Refrigeration (4)
 417 Machine Analysis Laboratory (1)
 420 Power Plants (4)
 422 Optimization of Mechanical Engineering Systems (4)
 425 Process Heat Transfer (4)
 426 Thermodynamics III (4)
 428 Mechanical Metallurgy (4)
 430 Circuit Analysis III (4)
 431AB Electric Communications I,II (4-4)
 432 Power Transmission Lines (4)
 433 Electric Power System Analysis (4)
 434 Electromagnetic Energy Conversion (4)
 435 Electronic Design with Integrated Circuits (4)
 437 Electric and Magnetic Fields (4)
 438AB Control Systems Theory I,II (4-4)
 439 Digital and Timing Circuits (4)
 441 Communications Laboratory (1)
 442 Control Systems Laboratory (1)
 443 Digital and Timing Circuits Laboratory (1)
 445 Communications Electromagnetics (4)
 446 Digital Logic Laboratory (1)
 447 Computer Organization (4)
 448 Computer Laboratory (1)
 449 Logic Design (4)
 460 Structural Mechanics II (4)
 461 Design of Steel Structures (4)
 462 Reinforced Concrete Design I (4)
 467 Foundations I (4)
 471 Highway Engineering I (4)
 472 Highway and Airport Pavement Design (4)
 473 Pavement Design Laboratory (1)
 474 Traffic Engineering (4)
 475 Advanced Surveying (4)
 483 Hydrology I (4)
 484 Sewerage and Sewage Treatment (4)
 485 Water Supply (4)
 490 Engineering Application of Digital Computers (4)
 493 Introduction to Biomedical Engineering (4)
 494 Biomedical Instrumentation (4)
 495 Introduction to Nuclear Engineering (4)
 498 Special Topics in Engineering (1-4)
 499 Undergraduate Directed Study (1-4)

Graduate Courses

Classified graduate standing required for admission.

501 Advanced Mechanics of Mechanisms (4)

Prerequisites: Engineering 321 and 401. Analytical approach to kinematics and dynamics of mechanisms with emphasis on matrix techniques and computer methods. Analysis and synthesis of two- and three-dimensional mechanisms.

502 Theory of Elasticity (4)

Prerequisites: Engineering 402 or 323; Mathematics 402A. Stress-strain relations, yield criteria, equations of linear elasticity, energy methods, boundary value problem, thermoelasticity, non-linear elasticity, applications in structural and machine design.

503 Design of Mechanical Systems and Products (4)

Prerequisites: Engineering 414 and 422. Principles of design; value criteria; manufacturing and human factors; computer-aided simulation and analysis; synthesis of design.

504 Thermal Radiation (4)

Prerequisites: Engineering 306 and 326B. Thermodynamics and physics of thermal radiation and its interactions with matter; formulation and solution of radiative transfer equations for surfaces and enclosures by means of exact, approximate and numerical methods; applications to selected topics.

505 Heat Conduction (4)

Prerequisites: Engineering 306, 326B, and Mathematics 402A. Fundamentals of heat conduction, solution of steady and unsteady state heat conduction problems by means of exact, approximate, and numerical methods; applications to selected topics.

506 Heat Convection (4)

Prerequisites: Engineering 408. Development of equations describing fluid motion and heat convection. Analytical and experimental results for free and forced convection and for changes in phase.

508 Compressible Fluids (4)

Prerequisite: Engineering 408. One-dimensional gas dynamics; shock waves in supersonic flow; flow in ducts and nozzles; applications to high speed aerodynamics; multidimensional and unsteady frictionless flow; solution by small perturbation theory and method of characteristics.

509 Viscous Fluids and Boundary Layer Theory (4)

Prerequisites: Engineering 408 and Mathematics 402A. Derivation of Navier-Stokes and boundary layer equations. Solutions for very slow, viscous motion, incompressible and compressible laminar boundary layers, introduction to turbulent boundary layer theory. Heat transfer and aerodynamic applications.

511 Vibrational Analysis II (4)

Prerequisites: Engineering 411, 490; Mathematics 402A. Analysis of multi-degree of freedom systems, continuous systems, random vibrations, analog and digital computer applications.

512 Advanced Topics in Thermodynamics (4)

Prerequisite: Engineering 426 or Chemistry 414. Advanced study of selected topics in thermodynamics with applications to engineering systems; review of current literature.

521 Advanced Controls of Mechanical Systems (4)

Prerequisites: Engineering 422 and 438A. Performance criteria and system compensation, stability of non-linear systems, modeling, analog and digital computer simulation, optimization, component and system design.

525 Process Mass and Heat Transfer (4)

Prerequisite: Engineering 425. Principles of mass transfer by diffusion, evaporation and condensation, phase equilibrium, two-phase flow. Applications such as cooling towers, heat exchangers, vaporizers, evaporators, reboilers, distillation, and desalinization.

530 Linear Systems Analysis (4)

Prerequisites: Engineering 430 and Mathematics 402A. Review of transform methods; inverse transforms by contour integration; state space variable, properties of network functions and network parameters; time domain analysis; positive real functions.

531A Principles of Communication Theory I (4)

Prerequisites: Engineering 431B and 439. Comparative analysis of the following information transmission systems: AM, FM, PPM, and PCM. Introduction to statistical method in analysis of information transmission systems.

531B Principles of Communication Theory II (4)

Prerequisites: Engineering 531A and Mathematics 402A. Transmission and filtering of random signals. Causal and noncausal filters; communication of digital data in the presence of noise.

532 Detection of Signals in Noise (4)

Prerequisite: Engineering 531A. Techniques for detection of both known signals and unknown signals with unknown parameters in presence of noise. Discussion of hypothesis testing, likelihood functions, receiver configurations and basic estimation theory.

536A Solid State Electronics I (4)

Prerequisite: Engineering 435. Theory and applications of solid state electronic devices with emphasis on recently developed devices.

536B Solid State Electronics II (4)

Prerequisite: Engineering 536A. Continuation of Solid State Electronics I; theory and applications of solid state electronic devices with considerable emphasis on recently developed devices including integrated circuits and field-effect transistors.

536C Solid State Electronics III (4)

Prerequisite: Engineering 536B. Physical electronics and device characteristics of solid state electronic devices; fabrication of monolithic and hybrid integrated circuits; device characteristics of monolithic and hybrid integrated circuits, field-effect transistors.

537AB Microwave Electromagnetics (4-4)

Prerequisites: Engineering 445 and Mathematics 402A. Anisotropic media, waveguide and field theory, antennas; passive and active microwave circuit design; microwave systems.

538 Linear and Non-linear Control Systems Theory (4)

Prerequisites: Engineering 438B and Mathematics 402A. Analysis and design of advanced control systems, including optimal control: use of computer in control systems.

544 Digital Systems Design (4)

Prerequisites: Engineering 439 and 449. Circuit and logic design of digital systems, digital computer elements, arithmetic and control units, design of general purpose digital computers.

547AB Computer System Architecture (4-4)

Prerequisite: Engineering 447. Computational algorithms and the arithmetic processor, central control and microprogramming, input-output processors, data communication processors and time-sharing systems.

548 Digital Sampled Data, and Logic Control Systems Theory (1)

Prerequisites: Engineering 344 and 438B; Mathematics 402A. Analysis and design of linear and non-linear sampled data, digital and logic control systems. Numerical control and on-line computer control systems.

560 Structural Mechanics III (4)

Prerequisite: Engineering 460. Column analogy, moment distribution applied to non-prismatic members, elastic energy method applied to arches and curved members, influence lines for indeterminate structures and secondary stresses.

561 Advanced Structural Design (4)

Prerequisite: Engineering 461. Design of light gauge steel members, aluminum alloys, and timber. Plastic design. Optimum design principles and its applications.

562 Reinforced Concrete Design II (4)

Prerequisite: Engineering 462. Creep and plastic flow of concrete. Theory and practice of ultimate strength design. Prestressed concrete structures.

563 Matrix Computer Analysis of Structures (4)

Prerequisites: Engineering 460 and 490. Matrix methods applied to statically determinate and indeterminate structures, flexibility and stiffness methods, digital computer applications.

564 Numerical Methods in Structural Analysis (4)

Prerequisite: Engineering 490 and 460 or 402. Finite difference and finite-element methods for structures; free and forced vibrations; bending, buckling of beams and plates; special applications.

565 Dynamics of Structures (4)

Prerequisites: Engineering 414 or 460. Free vibrations, forced vibrations and transient response of structures and structural components having one and many degrees of freedom; damping and inelastic action, earthquakes and nuclear blasts; dynamic resistance of structures; limit design; design for dynamic loads.

566 Soil Mechanics II (4)

Prerequisite: Engineering 467. Equilibrium and movement of soil water, soil consolidation and settlement, shear strength, bearing capacity.

567 Foundations II (4)

Prerequisite: Engineering 467. Earth-pressure problems and problems of deep excavation; design of anchored bulkheads, cofferdams, piles under lateral loads, underpinning.

569 Earth Structures (4)

Prerequisite: Engineering 467. Factors influencing design, explorations for foundations and construction processes, compactions, stability analysis, seepage control, earth dams.

570 Soil Dynamics (4)

Prerequisite: Engineering 467. Dynamic properties of soils, vibratory effects on foundations, earthquake effects on foundations, dynamic stability of earth structures.

572 Plates and Shells (4)

Prerequisites: Engineering 402 and 460. Equations of bending of thin elastic plates, energy method; approximate and numerical methods; theory of shells with application to tanks, roofs, and pressure vessels.

581 Hydrodynamics (4)

Prerequisites: Engineering 303 and Mathematics 402A. Mechanics of an incompressible ideal fluid, two- and three-dimensional irrotational flow, flow around bodies, vortex motion.

582 Statistical Hydrology (4)

Prerequisites: Engineering 209 and 483. Statistical and probability analysis of hydrologic processes. Application of correlation and regression method to hydrologic variables. Elementary time series analysis of hydrologic data.

583 Hydrology II (4)

Prerequisite: Engineering 483. Space-time characteristics and mechanics of rainfall, surface run-off, and infiltration. Theory of drainage basin dynamics. Low stream flow.

585 Theory of Models (4)

Prerequisite: Engineering 303. Dimensional analysis, principle of similitude, application of similarity law to models.

586 Open Channel Hydraulics (4)

Prerequisites: Engineering 387 and Mathematics 302. Flow types, flow profile computations; design of channels and transition structures; unsteady flow.

587 Hydraulics II (4)

Prerequisite: Engineering 387. Unsteady flow in pipes, wave motion, sediment transportation, and coastal engineering.

588 Hydraulic Structures (4)

Prerequisite: Engineering 387. Hydraulic structures for impounding, conveying, and controlling water.

589 Coastal Engineering (4)

Prerequisite: Engineering 387. Fundamentals of water waves and their effects. Diffraction, reflection, and refraction; impulsively generated waves; effect of waves on coastal structures.

597 Graduate Research (1-5)

Prerequisites: Consent of instructor to act as sponsor and departmental approval of project prior to registration. Independent research, under guidance of the faculty. May be repeated for credit. Graded CR/NC only.

598 Graduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Independent, directed study of advanced topics in the field, regular conferences with the sponsor. May be repeated for credit.

599 Thesis (1-4)

Prerequisite: Advancement to candidacy, consent of an instructor to act as sponsor and School's approval of the topic prior to registration. Independent research resulting in a thesis. May be repeated to maximum of 9 units. Graded CR/NC only.

English

In School of Letters and Science

The Master of Arts in English offers opportunities for further study in literature, criticism, and language. It assists teachers in public secondary schools in improving their professional status, and enables others to acquire the community college credential. In addition to providing the basis for doctoral studies, the program also prepares students for careers in such fields as law, government, and business.

Admission to the Program

Applicants must have a bachelor's degree in English and a 2.75 g.p.a. in the last 90 quarter units. Students whose major was not English should consult the principal graduate adviser about prerequisites or their equivalents.

Requirements for the Degree

The program requires either 45 units of course work, including a comprehensive examination, or 40 units and a master's essay for 5 units. A minimum of 23 units in 500-level courses must be included.

Students preparing for the M.A. in English must take English 540 prior to English 520, 560, 562, 580 and 598. It may be taken concurrently with the first of these courses selected on the approved program.

Required in English (24 units):

540 Seminar in the Critical Process (4)

Select 20 units from 500-level courses.

Electives (16–21 units):

Select from 400- or 500-level courses with approval of adviser; 8 units may be in a related field. A maximum of 5 units in English 598 is applicable toward the degree.

Comprehensive Exam or Thesis (0–5 units):

The comprehensive examination may be taken no earlier than the quarter in which all course work for the degree is completed. Students must notify the department one quarter before they intend to take the examination. Advancement to candidacy and approval of the department's graduate studies committee are required prior to taking the examination.

Advancement to candidacy, formal approval by the department of the thesis proposal, enrollment in 5 units of 599, and an oral examination of the thesis are required for the thesis option.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

400 Introduction to Linguistics (4)

401 English Language in America (4)

402 History of the English Language (4)

403 Language and Culture (4)

405 Modern English Grammar (4)

416 Chaucer (4)

417 Shakespeare I (4)

418 Shakespeare II (4)

419 Milton (4)

424 Greek and Roman Drama in Translation (4)

427 Modern Drama (4)

428 Contemporary Drama (4)

441 Major Critics (4)

446 British Novel: Defoe to Hardy (4)

447 British Novel: Conrad to Present (4)

451 Film and Literature (4)

460 Medieval English Literature (4)

461 Dramatic Literature of the English Renaissance (4)

463 The English Renaissance (4)

464 Seventeenth Century Literature (4)

465 The Augustan Age (4)

467 The Romantic Age (4)

468 The Victorian Age (4)

471 American Authors: Edwards to Emerson (4)

472 American Authors: Melville to Whitman (4)

473 American Authors: Dickinson to James (4)

475 American Novel Since 1920 (4)

478 Modern Poetry (4)

479 Contemporary Poetry (4)

480 Literature and Fine Arts, B.C. (4)

481 Literature and Fine Arts, A.D. (4)

482 The Bible as Literature: Old and New Testaments (4)

484 Major Continental Fiction:

Cervantes to Balzac (4)

485 Major Continental Fiction:

Stendhal to Tolstoy (4)

486 Twentieth Century Continental Fiction (4)

490 Special Studies in British Writers (4)

491 Special Studies in American Writers (4)

492 Special Studies in World Writers in Translation (4)

493 Special Studies in Literary Criticism (4)

Graduate Courses

Classified graduate standing required for admission.

505 Seminar: Language and Literacy (4)

Prerequisite: English 401 or equivalent. Theories of language structure as they apply to contemporary usage.

506 Seminar: The Writing Process (4)

Writing and editing instructional, administrative, and professional materials. Emphasis on developing English skills needed to teach writing at secondary school or community college level, or to perform as staff writer or editor.

520 Seminar: American Literature (4)

Prerequisite: For English M.A. candidates, English 540 (may be taken concurrently). Study of one or two major writers or of selected significant works in poetry, drama, prose, or fiction. May be repeated as subject matter changes. Specific subject announced in *Schedule of Classes*.

540 Seminar: The Critical Process (4)

Prerequisite: English 441 or equivalent or consent of instructor. Introduction to graduate study in English. Concise review of critical principles and research techniques; brief critical essays.

560 Seminar: British Literature (4)

Prerequisite: English 540 (may be taken concurrently). Study of one or more major writers or of selected works in poetry, drama, prose, or fiction. May be repeated as subject matter changes. Specific subject announced in *Schedule of Classes*.

562 Seminar: Significant Intellectual Movements; Effects on Literature (4)

Prerequisite: For English M.A. candidates, English 540 (may be taken concurrently). Study of selected genres, works, and literary ideas in relation to intellectual, philosophical, social and esthetic positions. May be re-

peated as subject matter changes. Specific subject announced in *Schedule of Classes*.

580 Seminar: Continental or Classical Literature (4)

Prerequisite: English 540 (may be taken concurrently). Study of one or more major writers or of selected significant works in poetry, prose, fiction, or drama in Continental or Classical literature. May be repeated as subject matter changes. Specific subject announced in *Schedule of Classes*.

598 Graduate Directed Study (1-4)

Prerequisites: English 540 (may be taken concurrently), consent of instructor to act as sponsor, and approval of principal graduate adviser. Independent study of advanced topics in field; regular conferences with sponsor. Maximum of 4 units in any quarter; limit of 5 units toward degree. Graded CR/NC only.

599 Thesis (1-5)

Prerequisites: Advancement to candidacy and formal approval by department. Independent study resulting in a critical essay. Oral examination on essay required. Must be repeated to total of 5 units. Graded CR/NC only.

Foreign Languages and Literatures

In School of Letters and Science

The Department of Foreign Languages and Literatures offers programs leading to the Master of Arts degrees in French and Spanish.

Proficiency Examinations

Foreign language proficiency examinations are administered by the Department of Foreign Languages and Literatures. Students in programs requiring proficiency in a foreign language must apply to this department at the beginning of the quarter in which any such examination is to be taken.

French

The Master of Arts degree in French is designed to enable students to attain a high level of proficiency in the French language and its literature, to employ it skillfully in such pursuits as teaching, writing, translation and communications, or as preparation for undertaking doctoral study.

Admission to the Program

In addition to application to the University, students must file a departmental application for admission along with official transcripts of all previous college work. These documents must reach the Department of Foreign Languages and Literatures early in the quarter preceding that in which course work for the degree is to begin. Students who hold a bachelor's degree from Cal State L.A. and have not attended another college since graduation must also file a departmental application early in the quarter preceding graduate enrollment. No transcripts are required.

Prerequisite for admission are a Bachelor of Arts degree in French or its equivalent, and an acceptable score on the advanced French portion of the Graduate Record Examination. Applicants must also satisfy the Department Graduate Admissions Committee's standards on oral proficiency in French. In addition, beginning Latin is recommended as prerequisite to French 501.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required.

Required in French (16 units):

- 501 Development of the French Language (4)
- 535 Seminar: French Literary Prose Since World War II (4)
- 575 Seminar: French Literature (4-4)

(Four units of French 598 may be substituted for 4 units of French 575)

- 598 Graduate Directed Study (1-4)

Electives in French (24-29 units):

Select from courses below which have not previously been taken, including at least two 500-level courses.

- 400 Advanced Syntax (4)
- 413 French Literature of 16th Century (4)
- 414 French Literature of 17th Century (4)
- 415 French Literature: Prelude to Revolution (4)
- 420 French Novel of 19th Century (4)
- 430 French Theatre of 20th Century Prior to World War II (4)
- 431 French Novel of 20th Century Prior to World War II (4)
- 440 French Poetry from Baudelaire to Symbolism (4)
- 460 Masters of French Literature (4)
- 499 Undergraduate Directed Study (1-4)
- 515 Seminar: Voltaire and Rousseau (4)
- 540 Seminar: French Post-Symbolist Poetry (4)
- 575 Seminar: French Literature (4)
- 598 Graduate Directed Study (1-4)

Electives in Related Fields (0-5 units):

Any remaining courses needed to complete the M.A. program may be taken in a related field, with approval of adviser.

Comprehensive Examination:

Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

- 413 French Literature of 16th Century (4)
- 414 French Literature of 17th Century (4)
- 415 French Literature: Prelude to Revolution (4)
- 420 French Novel of 19th Century (4)
- 430 French Theatre of 20th Century Prior to World War II (4)
- 431 French Novel of 20th Century Prior to World War II (4)
- 440 French Poetry from Baudelaire to Symbolism (4)
- 460 Masters of French Literature (4)
- 499 Undergraduate Directed Study (1-4)

Graduate Courses

Classified graduate standing required for admission.

501 Development of French Language (4)

Prerequisites: French 305, 400 and 401, or equivalents; beginning Latin strongly recommended. Scientific analysis of written and spoken French from its inception through its current use in French-speaking world.

515 Seminar: Voltaire and Rousseau (4)

Prerequisite: French 415 or consent of instructor. Selected studies in sources, character, and influence of two most prominent figures of French Enlightenment.

535 Seminar: French Literary Prose Since World War II (4)

Prerequisites: French 404, 430, 431, or consent of instructor. Studies in outstanding French prose writing and literary movements since World War II.

540 Seminar: French Post-Symbolist Poetry (4)

Prerequisite: French 440 or equivalent. Study of recent French poetic movements; *fantaisisme*, cubism, surrealism; metaphysical and religious poets; renewal of traditions; revolutionaries and other French-speaking cultures.

575 Seminar: French Literature (4)

Prerequisite: Undergraduate course or courses relevant to topic being studied. Intensive study of significant works of particular period, genre, or literary tendency from Middle Ages to present. May be repeated as subject matter changes to maximum of 12 units.

598 Graduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Independent study of advanced topics in field; regular conferences with sponsor. May be repeated for credit.

Spanish

The Master of Arts degree in Spanish is designed to enable students to attain a high level of proficiency in the Spanish language and its literature, to employ it skillfully in such pursuits as teaching, writing, translation and communications, or to be admitted to programs leading to the doctoral degree.

Admission to the Program

In addition to application to the University, students must file a departmental application for admission, along with official transcripts of all previous college work. These documents should reach the Department of Foreign Languages and Literatures early in the quarter preceding that in which course work for the degree is to begin. Students who hold a bachelor's degree from Cal State L.A. and have not attended another college since graduation must also file a departmental application early in the quarter preceding graduate enrollment. No transcripts are required.

Prerequisite for admission are a Bachelor of Arts degree in Spanish, or equivalent and an acceptable score on the advanced Spanish portion of

the Graduate Record Examination. Applicants must also satisfy the Department Graduate Admissions Committee's standards on oral proficiency in Spanish.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required.

Required in Spanish (12 units):

501 Development of the Spanish Language (4)

575 Seminar: Hispanic Literature (4-4)

Required Option (12 units):

Select one from following:

Spanish Option:

470 Contemporary Spanish Novel (4)

504 Studies in Medieval Literature (4)

540 Seminar: Contemporary Spanish Poetry (4)

Spanish-American Option:

483 Contemporary Spanish-American Novel (4)

505 Studies in *El modernismo* in Spanish-America (4)

545 Seminar: Contemporary Spanish-American Poetry (4)

Electives in Spanish (13 units):

Select from following:

414 Don Quixote de la Mancha (4)

417 Spanish-American Short Story (4)

418 Golden Age Prose (4)

421 Mexican Literature of 20th Century (4)

424 Golden-Age Drama of Spain (4)

426 Nineteenth Century Spanish Novel (4)

428 The Generation of '98 (4)

460 Masters of Hispanic Culture and Thought: Selected Studies (4)

470 Contemporary Spanish Novel (4)

480 Proseminar: Selected 20th Century Spanish Dramatists (4)

483 Contemporary Spanish-American Novel (4)

504 Studies in Medieval Literature (4)

505 Studies in *El modernismo* in Spanish-America (4)

540 Seminar: Contemporary Spanish Poetry (4)

545 Seminar: Contemporary Spanish-American Poetry (4)

598 Graduate Directed Study (1-4)

Electives (8 units):

Select courses in Spanish or from outside field of concentration, with approval of graduate adviser.

Comprehensive Examination:

Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the Master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

414 Don Quixote de la Mancha (4)

417 Spanish-American Short Story (4)

- 418 Golden Age Prose (4)
- 421 Mexican Literature of 20th Century (4)
- 424 Golden Age Drama of Spain (4)
- 426 Nineteenth-Century Spanish Novel (4)
- 428 The Generation of '98 (4)
- 460 Masters of Hispanic Culture and Thought; Selected Studies (4)
- 461 Twentieth-Century Spanish-American Fiction in Translation (4)
- 470 Contemporary Spanish Novel (4)
- 480 Proseminar: Selected 20th Century Spanish Dramatists (4)
- 483 Contemporary Spanish-American Novel (4)
- 485 Literature of Argentina and Uruguay (4)
- 499 Undergraduate Directed Study (1-4)

Graduate Courses

Classified graduate standing required for admission.

501 Development of Spanish Language (4)

Prerequisites: Spanish 320 and 400. Scientific analysis of written and spoken Spanish from its inception through its current use in Hispanic world.

504 Studies in Medieval Literature (4)

Prerequisites: Spanish 408 and 410 or equivalents. Principal Spanish literary works dating from twelfth to sixteenth century; their significance in historical development of various genres; their influence on subsequent literary history.

505 Studies in El Modernismo in Spanish America (4)

Prerequisites: Spanish 411 and 413 or equivalents. Analysis of representative works of writers of modernist movement in Spanish America; their influence on literature of contemporary period. Lectures and reports in Spanish.

540 Seminar: Contemporary Spanish Poetry (4)

Prerequisites: Spanish 408 and 410 or equivalents. Intensive study of Spanish poetry of past thirty years.

545 Seminar: Contemporary Spanish-American Poetry (4)

Prerequisites: Spanish 411 and 413 or equivalents. Intensive study of Spanish-American poetry of past thirty years.

575 Seminar: Hispanic Literature (4)

Prerequisites: Spanish 408 and 410 or 411 and 413 or equivalents. Intensive study of significant works of selected period in Spanish or Spanish-American literature. May be repeated as subject matter changes.

598 Graduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Independent study of advanced topics in field; regular conferences with sponsor. May be repeated for credit.



Geography

In School of Letters and Science

The Master of Arts degree program in Geography is designed to prepare students for teaching at the secondary and community college levels, employment in governmental and private industry, and for further graduate study in Geography.

Admission to the Program

Applicants must possess a bachelor's degree in Geography, or 35 quarter units or equivalent in upper division geography courses with a bachelor's degree in another field.

A placement examination administered by the department, and normally given during the first three weeks in any quarter, is also required for classified standing. This examination will be used for advisement purposes only.

Requirements for the Degree

A total of 45 units, including at least 23 in 500-level courses, is required.

Before enrolling in Geography 599 or taking the comprehensive examination, students must satisfy *one of the following requirements*, subject to the approval of the principal graduate adviser:

(a) Pass a foreign language proficiency examination in the geographic literature of a foreign language, as offered by the Department of Foreign Languages and Literatures and in accordance with the practice of that department.

(b) Pass 12 units in a foreign language in accordance with the practice of that department.

(c) Pass Business 294 or Mathematics 290 or their equivalent with a grade of B.

(d) Pass an examination in statistical methods in Geography administered by the Department.

(e) Pass an upper division course in statistics with a grade of B.

Required in Geography (16 units):

570 Seminar: Nature of Geography (4)

571 Seminar: Regional Geography (4)

575 Seminar: Human Geography (4)

580 Seminar: Physical Geography (4)

Students may elect to repeat either 571, 575 or 580 instead of taking all three, provided seminar topic is not repeated in exact area and theme.

Electives in Geography (12 units):

Select 400- and 500-level courses, with approval of adviser.

Electives in Related Fields (0-8 units):

Select with approval of adviser.

Comprehensive Exam/Thesis (0, 9 units):

Comprehensive Examination or 599 Thesis (6-9)

Students selecting the comprehensive examination should expect to take it in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements. Examination consists of section on geographic theory, plus sections in two of following areas as selected by each student: advanced regional geography, advanced

physical geography, advanced human geography, and research techniques in geography.

Students selecting the thesis must enroll for minimum of two quarters for a total of 6 to 9 units in 599.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

420 Geography of Humid Tropics (4)

421 Geography of U.S. and Canada (4)

423 Geography of Europe (4)

424 Geography of Asia (4)

425 Geography of Japan (4)

427 Geography of Middle America (4)

428 Geography of South America (4)

430 Geography of China (4)

431 Geography of California (4)

441 World Resources (4)

475 Geography of Settlement (4)

476 Geography of Urban Areas (4)

481 Political Geography (4)

485 Marine Geography (4)

496 Special Topics in Geography (4)

499 Undergraduate Directed Study (1-4)

Graduate Courses

Classified standing required for admission.

570 Seminar: Nature of Geography (4)

Prerequisite: Consent of instructor. History, objectives, and methods of geography.

571 Seminar: Regional Geography (4)

Prerequisite: Consent of instructor. Selected regions of world. May be repeated as subject matter changes.

575 Seminar: Human Geography (4)

Prerequisite: Consent of instructor. Seminar on selected topics pertaining to geography of man. May be repeated as subject matter changes.

580 Seminar: Physical Geography (4)

Prerequisite: Consent of instructor. Seminar on nature, origin, and areal occurrence of physical qualities of the land (climate, landforms, water, soils, and vegetation). May be repeated as subject matter changes.

598 Graduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Project selected in conference with sponsor.

599 Graduate Thesis (1-6)

Prerequisites: Advancement to candidacy, approval of department, completion of course work in master's program and completion of foreign language requirement. May be repeated to maximum of 9 units. Graded CR/NC only.

Geology

In School of Letters and Science

The Departments of Geology of three California State Universities (Los Angeles, Long Beach, and Northridge) are cooperating in offering courses leading to a Master of Science degree in Geology. The objectives of this joint program are as follows:

- (1) To offer a degree program which will equip individuals with the competencies required by the geological profession for employment in industry and governmental agencies.
- (2) To enable promising students to attain a level of knowledge and research ability required for admission to a Ph.D. program at other universities.
- (3) To provide an M.S. program with basic courses and research requirements for students planning to teach geology at the community college level.

Admission to the Program

The basic requirements are possession of a B.S. degree in Geology, or its equivalent, from an accredited college or university, in accordance with policies established by the Joint Committee, and a 2.75 g.p.a. in the last 90 quarter units. Students normally will be expected to have completed acceptable upper division course work in three of the following areas: geochemistry, stratigraphy, igneous and metamorphic petrology, and optical crystallography. Students who do not have appropriate upper division work in three of these areas may be admitted to the program, but will be expected to remove this deficiency or present alternatives acceptable to the Joint Committee.

Application Procedures

Applications for any quarter should be submitted early in the preceding quarter to the Department of Geology and the University Admissions Office. In addition to the specific prerequisites stated above, students must meet the Cal State L.A. general requirements for graduate study.

Requirements for the Degree

Programs will be designed with the assistance of a faculty adviser, who in turn will submit them for approval to a graduate advisory committee consisting of one faculty member from each of the three universities. All students must take Geology 597 and either Geology 599 or the comprehensive examination. Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Students must complete 45 quarter units of course work by taking 22.5 units of 500-level (600-level at Cal State, Long Beach) courses, including graduate research and/or thesis, and an additional 22.5 units of 400- or 500-level courses chosen with the approval of the student's adviser and the Graduate Advisory Committee. At least 13.5 quarter units must be taken at another of the

universities participating in the joint program; of these units, at least 4.5 must be in a 500- or 600-level course.

In addition to Geology courses at 500-level or above, the following courses are acceptable at the three campuses.

Cal State, Los Angeles: Geology 411, 412, 470, 471, 480, 481, 483.

Cal State, Long Beach: Geology 443, 460, 462, 464, 471.

Cal State, Northridge: Geology 403, 422, 424, 426, 445, 451.

Other Geology courses may be accepted, but must be approved by the Graduate Advisory Committee.

With approval of the Graduate Advisory Committee, appropriate 400-, 500-, or 600-level courses from related areas in science, mathematics, or engineering may be substituted in the above list to a maximum of 13.5 quarter units.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

CAL STATE, LOS ANGELES

- 411 Economic Geology of Non-metallic Deposits (4 q.u., 2 s.u.)
- 412 Economic Geology of Metallic Deposits (4 q.u., 2 s.u.)
- 470 X-ray Crystallography (4 q.u., 2 s.u.)
- 471 Analytical Geochemistry (4 q.u., 2 s.u.)
- 480 Principles of Geophysics (4 q.u., 2 s.u.)
- 481 Engineering Geology (4 q.u., 2 s.u.)
- 483 Photogeology (4 q.u., 2 s.u.)
- 490 Special Topics in Modern Geology (2-4 q.u., 1-2 s.u.)
- 491 Special Laboratory Topics in Modern Geology (1-3 q.u., 2 s.u.)

CAL STATE, LONG BEACH

- 443 Micropaleontology (3 s.u., 4.5 q.u.)
- 460 Geophysics (3 s.u., 4.5 q.u.)
- 462 Elements of Physical and Chemical Oceanography (3 s.u., 4.5 q.u.)

- 464 Geological Oceanography (3 s.u., 4.5 q.u.)
- 471 Petroleum Geology (2 s.u., 3 q.u.)
- 490 Current Topics in Geological Sciences (3 s.u., 4.5 q.u.)

CAL STATE, NORTHRIDGE

- 403 Micropaleontology (3 s.u., 4.5 q.u.)
- 422 Oceanography (4 s.u., 6 q.u.)
- 424 Marine Geology (3 s.u., 4.5 q.u.)
- 425 Economic Geology (3 s.u., 4.5 q.u.)
- 426 Seminar in Oceanography (2 s.u., 3 q.u.)
- 445 Regional and Historical Geology (3 s.u., 4.5 q.u.)
- 451 Engineering Geology (3 s.u., 4.5 q.u.)

Graduate Courses

Classified graduate standing required for admission.

510 Advanced Paleontology (4.5)

Prerequisites: Advanced undergraduate courses in invertebrate paleontology, and stratigraphy or micropaleontology. Seminars in various topics in invertebrate paleontology, such as biostratigraphy, paleoecology, and functional morphology. May include field or laboratory investigations. May be repeated as subject matter changes.

515 Advanced Micropaleontology (4.5)

Prerequisite: Three units of micropaleontology or consent of instructor. Advanced studies in morphology, taxonomy, ecology and paleoecology of microfossils; biostratigraphy and age determination of sedimentary rocks.

520 Advanced Stratigraphic Analysis (4.5)

Prerequisites: Introductory courses in stratigraphy, sedimentary petrology, paleontology, and field geology, or consent of instructor. Principles and techniques of stratigraphic analysis, with emphasis on interpreting stratigraphic record to aid in reconstruction of environment of deposition and paleogeography. Course revolves around field problem and includes application of methods from physical stratigraphy, biostratigraphy, and sedimentary petrology to solution of problem. Approximately half of laboratory devoted to field studies.

530 Seminar: Structural Geology and Tectonics (4.5)

Prerequisite: Geology 410 or upper division structural geology. Critical review of selected topics concerning analysis, interpretation and origin of geologic structures, mechanics of rock deformation and of large scale crustal deformation.

540 Advanced Igneous Petrology (4.5)

Prerequisites: Geology 401 and 441, or consent of instructor. Advanced study of occurrence and petrogenesis of igneous rocks. Laboratory includes microscopic study of selected rock suites and application of instrumental techniques of igneous rocks.

541 Advanced Metamorphic Petrology (4.5)

Prerequisites: Geology 401 and 441, or consent of instructor. Advanced study of occurrence, origin and interpretation of metamorphic rocks. Laboratory includes microscopic study of rock suites.

550 Advanced Crystal Chemistry (4.5)

Prerequisites: Geology 201 and 202, or consent of instructor. Seminars in crystal chemistry, emphasizing structural and chemical mineralogy, determinative methods, mineral synthesis, and computer applications. May be repeated for credit.

555 Advanced Geochemistry (4.5)

Prerequisite: Geology 370, or upper division geochemistry, or consent of instructor. Methods of radiometric age determination, including dating of igneous and metamorphic rocks and sediments; use of lead and strontium as natural tracers; light stable isotopes, oxygen, carbon and sulfur as petrogenetic indicators in igneous rocks and ore-forming processes.

562 Chemical Oceanography (4.5)

Prerequisite: Geology 462 or consent of instructor. Advanced studies in chemistry of ocean and their relationships to processes in lithosphere, atmosphere and biosphere. Critical review of literature and reports in chemical oceanography, which may include chemical equilibria, chemical thermodynamics, and inorganic and organic constituents of ocean; emphasis on recent studies and new concepts.

564 Advanced Marine Geology (4.5)

Prerequisites: Upper division courses in marine geology and oceanography or consent of instructor. Studies in marine geomorphology, tectonics, sedimentation, stratigraphy, coastal development, and allied topics.

570 Special Topics (2-4.5)

Prerequisite: Consent of instructor. Discussion of selected topics in geology. May include up to 2 units of laboratory. May be repeated for credit as subject matter changes.

581 Seminar: Engineering Geology (4.5)

Prerequisite: Geology 481 or senior course in engineering geology or consent of instructor. Advanced study relating geologic factors to engineering projects, with emphasis on slope stability, subsidence, engineering seismology, and construction problems related to engineering geology.

597 Graduate Research (4.5)

Prerequisites: Consent of instructor to act as sponsor and approval of project by Joint Graduate Advisory Committee. Independent research under guidance of faculty. Graded CR/NC only.

598 Graduate Directed Study (1-4.5)

Prerequisite: Consent of an instructor to act as sponsor. Directed research on subjects selected in consultation with faculty. May be repeated to maximum of 6 units.

599 Graduate Thesis (4.5)

Prerequisites: Advancement to candidacy and consent of an instructor to act as sponsor. Presentation of independent research work in a written thesis, which is defended orally. Graded CR/NC only.



Health and Safety Studies

In School of Fine and Applied Arts

The Master of Arts degree program in Health and Safety Studies provides advanced preparation for teachers in the health sciences and safety studies fields, and qualifies graduates for leadership and administrative positions in allied health services.

Admission to the Program

Applicants must have the equivalent of an undergraduate major in Health and Safety Studies, or teaching or related professional experience with a bachelor's degree which includes sufficient courses in health, safety, and the basic sciences to provide a foundation for advanced work. In addition applicants must have a 2.75 g.p.a. in the last 90 quarter units and a score of 400 on either the Verbal or Quantitative Aptitude Test of the GRE.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required. Fourteen units of 500-level must be in Health and Safety.

Required in Health and Safety (4 units):

580 Seminar: Health and Safety Research (4)

Electives in Health and Safety (28-40 units):

Select with approval of adviser.

Electives in Related Fields (0-12 units):

Select with approval of adviser.

Comprehensive Exam or Thesis/Project (0, 6 units):

Comprehensive Examination:
and

598 Graduate Directed Study (1-4)

or

599 Thesis or Project (6)

Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

422 Radiation Hazards in Health and Safety (2)

423 Radiological Health (2)

455 Sex Information for Health Education (3)

456 Health Studies on Dangerous Drugs and Narcotics, Alcohol and Tobacco (4)

460 School Health Studies (2)

461 School Health Services (2)

462 Chronic and Degenerative Disorders (3)

463 Community and Environmental Problems (2)

464 Community Health Agencies (2)

479 Organization and Supervision of Safety and Driver Instruction (2)

490 Administration of School Health Programs (3)

491 Special Studies in Health and Safety (1-4)

499 Undergraduate Directed Study (1-4)

Graduate Courses

Classified graduate standing required for admission.

540 Analysis of Health Care Delivery Systems (4)

Prerequisite: Consent of instructor. National and international health care delivery systems, their historical development, objectives, designs, systems components; personnel, facilities, financing and utilization problems; future patterns in health care delivery systems. Field visits may be required.

560 Administration of Health and Safety Education (2)

Organization, content, and evaluation of health and safety education programs; administration and supervision in official and non-official agencies.

570 Health Appraisal (2)

Prerequisite: Preparation in fields of school or community health programming. Development of skills in recognizing health problems and choosing appropriate techniques and instruments for screening and making referrals to community facilities.

571 Health Guidance (2)

Prerequisite: Health and Safety 570. Implementation of individual and group health appraisal instruments in health guidance; individual and group dynamics through various techniques of guidance.

577 Advanced Studies in Traffic and Safety Education (4)

Prerequisites: Health and Safety 474 and 475 or consent of instructor. Analysis of latest developments and trends in safety and traffic education relating to driver education and driver training programs.

578 Legal Aspects of Driver Education and Driver Training (4)

Prerequisites: Health and Safety 474 and 475 or consent of instructor. Critical analysis of driver safety laws relating to teacher; related laws that affect driver education and training programs.

580 Seminar: Health and Safety Research (4)

Prerequisites: Health and Safety 560 and 570 or equivalents and approval of department. Analysis of and research in health sciences and safety programs.

591 Advances in Health Education (3)

Prerequisite: Minimum of 12 units in 500-level Health and Safety courses or approval of instructor. Analysis of selected contemporary problems in community health and safety. May be repeated as subject matter changes.

595 Field Study in Health or Safety (1-6)

Prerequisites: Consent of instructor and departmental approval. Supervised individual field experience in an applied area of health or safety. May be repeated to maximum of 8 units.

597 Graduate Research (1-6)

Prerequisites: Consent of an instructor to act as sponsor and departmental approval of project prior to registra-

tion. Independent research under guidance of the faculty. Must be repeated to maximum of 6 units. Graded CR/NC only.

598 Graduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Independent study of advanced topics in field; regular conferences with sponsor. May be repeated to maximum of 6 units.

599 Thesis or Project (1-6)

Prerequisites: Consent of an instructor to act as sponsor and departmental approval of topic prior to registration. Independent research resulting in a thesis or project. Must be repeated to maximum of 6 units. Graded CR/NC only.

Health Care Management

Offered Jointly by Schools of Business and Economics, and Fine and Applied Arts

The interdisciplinary program for the Master of Science degree in Health Care Management is designed to prepare students for department head positions in health care facilities in large metropolitan areas. It combines management skills with an awareness of the most recent developments in health care delivery.

The Health Care Management faculty is drawn from the Schools of Business and Economics, and Fine and Applied Arts, with William G. Baker, III, Associate Professor of Management, serving as Coordinator.

Admission to the Program

In addition to the University requirements for admission to graduate study, applicants must meet the following requirements:

- (1) A 2.75 or above g.p.a. in the last 90 quarter units.
- (2) A minimum of one year recent full-time work experience or equivalent in a health care setting.
- (3) Two recommendations from persons who have supervised the individual's work in a health care setting sent to the Health Care Management Advisory Committee, in care of the Department of Management, School of Business and Economics, prior to May 15 for admission to Summer Quarter, August 1 for Fall Quarter, November 15 for Winter Quarter, and February 15 for Spring Quarter.

Requirements for the Degree

A total of 45 units is required as follows:

Required Courses (32 units):

In Business:

433 Budgeting (4)

470 Managerial Leadership and Motivation (4)

501 Administrative Practices and Human Relations (4)

563 Organization and Management of Health Institutions (4)

564 Labor Relations Aspects of Health Care Delivery (2)

In Health and Safety:

540 Analysis of Health Care Delivery Systems (4)

In Nursing:

540 Human Resource Utilization in Health Care Organizations (2)

542 Seminar: Health Care Administration (2)

In Health and Safety or Nursing:

595 Advanced Field Study (2-2-2)

Electives (13 units):

Select from 400 or 500-level courses with prior approval of adviser.

Comprehensive Examination:

Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs.

History

In School of Letters and Science

The Master of Arts degree in History is designed for the attainment of a liberal education appropriate to careers in such professions as law, journalism, business, government service, and librarianship, as well as preparation for teaching and further graduate study.

The program requires intensive study involving courses, seminars, and directed reading in preparation for comprehensive examinations. Students should obtain reading lists well in advance of the examination from the examining faculty member in each field.

Admission to the Program

In addition to the University requirements for admission to graduate study, applicants must have a minimum of 32 units in approved upper division history courses, including History 190 and 493 or the equivalent, plus 8 units in related social science fields.

Application to both the Department of History and the University, is required, on forms available from the department's graduate studies committee. Transcripts from all colleges attended by graduates of schools other than Cal State L.A. must be submitted with the application for evaluation. If applicants have submitted two sets of transcripts to the University Admissions Office and designated the M.A. in History as their objective, that office will forward transcripts to the department. Transcripts of Cal State L.A. graduates are available to the department.

Language Requirement

Students must demonstrate reading competence in a foreign language before attempting the comprehensive examination. This is accomplished by passing a foreign language proficiency examination in the language selected, as offered in the Department of Foreign Languages and Literatures, with approval of that department.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required.

Required in History (24 units):

Select six 500-level seminars, with approval of adviser for total of 24 units.

Electives in History, Related Fields (21 units):

Select 400- or 500-level courses in history with approval of adviser. Courses outside history may be substituted to maximum of 9 units, with approval of adviser.

Comprehensive Examinations:

Comprehensive examinations must be passed in three fields chosen from two or more areas listed below. Flexibility for options within these fields can be arranged. Students should expect to take the comprehensive examinations in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Fields for Comprehensive:

AREA ONE

- 1 United States to 1876
- 2 United States since 1850
- 3 United States: The West
- 4 United States: Social and Intellectual
- 5 Latin America

AREA TWO

- 6 Greece
- 7 Rome
- 8 Early Medieval (to 1100)
- 9 Late Medieval (after 1100)
- 10 Early Modern Europe (1500-1789)
- 11 Modern Europe (1789 to Present)
- 12 British Peoples
- 13 Russia

AREA THREE

- 14 Middle East
- 15 East Asia
- 16 South Asia
- 17 Africa
- 18 History of Science

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

- 400A History of Science: Antiquity to Renaissance (4)
- 400B History of Science: Renaissance to 1800 (4)
- 400C History of Science: 19th and 20th Centuries (4)
- 402 History of Astronomy (4)
- 410 Ancient Near East: 4000-323 B.C. (4)
- 411 History of the Hellenic World (4)
- 412 History of Rome (4)
- 413 Greek History: Alexandrian Age (4)
- 414A Traditional Sub-Saharan Africa (4)
- 414B Modern Sub-Saharan Africa (4)
- 415 Contemporary Sub-Saharan Africa (4)
- 416 The Republic of South Africa (4)
- 419 The Middle East: 600-1258 (4)
- 420 The Middle East: 1258-1798 (4)
- 421 The Early Middle Ages (4)
- 422 The Later Middle Ages (4)
- 423 Renaissance and Reformation (4)
- 424 Seventeenth Century Europe (4)
- 425 Eighteenth Century Europe (4)
- 426 French Revolution and Napoleon (4)
- 427 Europe: 1815-1871 (4)
- 428 Europe: 1871-1914 (4)
- 429 Europe: 1914 to the Present (4)

- 431 History of Modern Germany (4)
- 437 Social History of Europe (4)
- 438 Economic History of Europe (4)
- 439 Intellectual History of Europe (4)
- 440 Early Modern England (4)
- 441 British History from 1688-1865 (4)
- 442 Great Britain since 1865 (4)
- 443 The British Empire (4)
- 444A Spain and Portugal to 1700 (4)
- 444B Spain and Portugal since 1700 (4)
- 445 Russia to 1801 (4)
- 446 Russia: 1801-1917 (4)
- 447 History of the Soviet Union (4)
- 449A East Central Europe to 1918 (4)
- 449B East Central Europe from 1918 to Present (4)
- 450 Special Studies in History (2 or 4)
- 451 Special Lectures in History (2-4)
- 461 Latin America: Colonial Period (4)
- 462 Latin America: 1810-1914 (4)
- 463 Latin America: 1914 to Present (4)
- 465 Brazil (4)
- 466 Mexico (4)
- 470 The U.S.: 1607-1763 (4)
- 471 The U.S.: 1763-1815 (4)
- 472 The U.S.: 1815-1877 (4)
- 474 The U.S.: 1877-1929 (4)
- 475 The U.S.: 1929 to Present (4)
- 476 Economic History of the U.S. (4)
- 477A Social and Intellectual History of U.S. to 1860 (4)
- 477B Social and Intellectual History of the U.S. 1860-1919 (4)
- 477C Social and Intellectual History of the U.S. Since 1920 (4)
- 478 U.S. Diplomatic History (4)
- 479 Constitutional History of the U.S. (4)
- 480 Ethnic Groups in American History (4)
- 481 Westward Movement and West to 1850 (4)
- 482 Westward Movement and West Since 1850 (4)
- 483 Rise of Urban America (4)
- 484 Civil War and Reconstruction (4)
- 488 California (4)
- 489 Los Angeles (4)
- 490A Traditional India (4)
- 490B Modern India and Pakistan (4)
- 491 The Middle East: 1798-1919 (4)
- 492 Contemporary Middle East (4)
- 494A Traditional China (4)
- 494B Modern China (4)
- 495A Traditional Japan (4)
- 495B Modern Japan (4)
- 496 History of Southeast Asia (4)

Graduate Courses

Classified graduate standing required for admission.

510 Seminar: History of Science (4)

Prerequisite: Eight units chosen from History 400ABC, 402, 403, or consent of instructor. Readings, discussion, and research paper on topics in internal history of science and in social relations of science. May be repeated for credit.

519 Seminar: Ancient History (4)

Prerequisite: Eight units of ancient history or equivalent. Reading knowledge of Latin and/or Greek recommended. Readings, discussion, and paper on topics in Greek or Roman history. May be repeated for credit.

520 Seminar: History of Middle Ages (4)

Prerequisite: Eight units of medieval history or equivalent. Readings, discussion, and research paper. May be repeated for credit.

522 Seminar: Middle Eastern History (4)

Prerequisite: Eight units of upper division Arab-Islamic history or consent of instructor. Readings, discussion and research paper. May be repeated for credit.

532 Seminar: Early Modern European History (4)

Prerequisites: Eight units of European history or equivalent. Readings, discussion, and research paper. May be repeated for credit.

533 Seminar: Recent European History (4)

Prerequisite: Eight units of European history or equivalent. Readings, discussion, and research paper in modern European history. May be repeated for credit.

540 Seminar: British History (4)

Prerequisite: Eight units of British history or equivalent. Readings, discussion, and research paper. May be repeated for credit.

542 Seminar: Russian History (4)

Prerequisite: Eight units of Russian history or consent of instructor. Readings, discussion, and research paper. May be repeated for credit.

561 Seminar: History of Modern Mexico (4)

Prerequisites: History 461 and 462, or History 466, and reading competence in Spanish. Readings, discussion and research paper. May be repeated for credit.

562 Seminar: Latin American History (4)

Prerequisites: Eight units of Latin American history and reading competence in Spanish or Portuguese. Latin American historiography; research in selected topics in Latin American history excluding modern Mexico. Readings, discussion, oral reports and research paper. May be repeated for credit.

571 Seminar: Early History of U.S. (4)

Prerequisite: Eight units of American history or equivalent or consent of instructor. Readings, discussion, and research paper. May be repeated for credit.

575 Seminar: Recent History of U.S. (4)

Prerequisite: Eight units of American history or equivalent or consent of instructor. Readings, discussion, and research paper. May be repeated for credit.

577 Seminar: American Social and Intellectual History (4)

Prerequisite: Eight units in History 477ABC, or American Studies 402 or consent of instructor. Readings, discussion and research paper. May be repeated for credit.

581 Seminar: History of The U.S. West (4)

Prerequisites: Eight units in History 481, 482, 488, 489 or equivalent or consent of instructor. Readings, discussion and research paper. May be repeated for credit.

591 Seminar: Recent Asian History (4)

Prerequisites: Eight units of Asian History or consent of instructor. Readings, discussion and research paper. May be repeated for credit.

598 Graduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Independent study of advanced topics in field; regular conferences with sponsor. May be repeated for credit.



Home Economics

In School of Fine and Applied Arts

The Master of Arts degree in Home Economics is designed to strengthen professional competence and to prepare for leadership positions in teaching, community agencies, and consumer-oriented occupations. The flexibility of the program enables students to pursue individualized courses of study designed to meet professional needs and goals.

Admission to the Program

In addition to the University requirements for admission to graduate study, applicants must have an undergraduate major in Home Economics, or equivalent, or a major in a related field and at least 30 quarter units in Home Economics, which may be taken as co-requisites providing prerequisites to individual courses in the program have been met.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required. All programs must be approved by the department's graduate studies committee.

Required in Home Economics (6 units):

- 577 Research Concepts in Home Economics (3)
- 580 Seminar: Home Economics (3)

Electives in Home Economics (24 units):

Select with approval of adviser, include at least 8 units in 500-level courses.

Additional Electives (6-15 units):

Select in Home Economics and related fields with approval of adviser.

Comprehensive Examination or Thesis/Project (0, 9 units):

Comprehensive Examination
or

- 599 Thesis or Project (6-9)

Combined units of 597, 598, and 599 may not exceed 15.

Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

- 400 Tailoring (3)
- 401 Fashion Design II (3)
- 402 The Fashion Industry (4)
- 405 Textile Study (3)
- 409 Historic Textiles (4)
- 410 Experimental Foods (4)
- 411 Evaluation of Current Nutrition Concepts (3)
- 412 Advanced Foods (4)
- 414AB Institutional Food Service (4-4)

- 415AB Diet Therapy (2-3)
- 416N Child Nutrition (4)
- 416CD Child Nutrition (4)
- 417AB Advanced Nutrition I, II (3-3)
- 418 Community Nutrition (3)
- 420 Preadolescent in the Family (3)
- 421 Marriage and Family Dynamics (4)
- 422 Nursery School Organization and Management (3)
- 423 Parenting (4)
- 424 The Formerly Married (4)
- 425 Readings in Child Development (3)
- 430 Household Equipment (4)
- 440 Family Finance (4)
- 441 Urban Family and Its Resources (4)
- 443 Management Problems in Urban Housing (4)
- 444 Consumer Issues (4)
- 445 Management for Aged or Physically Handicapped (4)
- 460 Housing (4)
- 461 Home Furnishings Problems (4)
- 463 Problems in Residential Interiors (4)
- 465 History of Housing (4)
- 466 History of Furnishings and Interiors: Antiquity to Mid-18th Century (4)
- 467 History of Furnishings and Interiors: Neo-Classical to Present (4)
- 470 Demonstration Techniques (4)
- 471 Communication of Home Economics Concepts (4)
- 480 Special Studies in Home Economics (2-4)
- 481 Contemporary Issues in Home Economics (4)
- 491 Programs for Occupational Education in Home Economics (4)
- 495 Field Work in Home Economics (2-4)
- 499 Undergraduate Directed Study (1-4)

Graduate Courses

Classified graduate standing required for admission.

501 Experimental Fashion Design (3)

Prerequisite: Home Economics 401 or consent of instructor. Theory of fashion design and its application. Creative designing through experimentation. Lecture-laboratory 6 hours.

502 Readings in Socio-Psychological Aspects of Clothing (4)

Prerequisites: Home Economics 101, basic courses in psychology and sociology and/or anthropology, or consent of instructor. Clothing as an aspect of human behavior; theories and research in social sciences with clothing as a variable; clothing in relation to individual and social behavior.

510N,F Nutrition and Food Experimentation (4-4)

Prerequisites: Home Economics 417A for N; 410 for F. Research problems in nutrition and food. Lecture 2 hours, laboratory 6 hours.

520 Current Issues and Research in Infancy and Early Childhood (4)

Prerequisites: Home Economics 320 or 678 units in child development or consent of instructor. Advanced study of selected current issues and research related to growth and behavior in infancy and early childhood.

530 Household Equipment: Performance Testing (4)

Prerequisites: Home Economics 430. Performance testing of selected pieces of household equipment; evaluation of materials, construction, and effect on product. Lecture-laboratory 8 hours.

541 Theory and Philosophy of Home Management (4)

Prerequisite: Home Economics 341. Conceptual development of home management. Analysis of theoretical framework; research and implementation techniques.

573 Advanced Problems in Home Economics Curriculum (4)

Prerequisites: Educational Foundations 413A, Home Economics 493; student teaching or other teaching experience in home economics. Current concepts, developments, and trends in home economics curricula; application to specific tasks in curriculum development.

577 Research Concepts in Home Economics (3)

Prerequisite: A course in statistics. Examination of research methodology in home economics; utilization of

research tools; review and critique of published research; development of a research proposal.

580 Seminar: Home Economics (3)

Prerequisite: Home Economics 577 or consent of department. Advanced study of selected topics in home economics; subject announced in *Schedule of Classes*. May be repeated as subject matter changes.

597 Graduate Research (1-4)

Prerequisites: Home Economics 577, consent of an instructor to act as sponsor, and departmental approval of project prior to registration. Independent research under guidance of the faculty. May be repeated to maximum of 8 units, except that combined units of 597 and 598 may not exceed 12 units and combined units of 597, 598, and 599 may not exceed 15. Graded CR/NC only.

598 Graduate Directed Study (1-4)

Prerequisites: Home Economics 577, consent of an instructor to act as sponsor, and departmental approval of topic prior to registration. Supervised study of advanced topics. May be repeated to maximum of 8 units, except that combined units of 597 and 598 may not exceed 12 units and combined units of 597, 598, and 599 may not exceed 15.

599 Thesis or Project (1-6)

Prerequisites: Home Economics 577, 580 (in area of thesis or project research), minimum of 3 units of 597, advancement to candidacy, consent of instructor to act as sponsor and departmental approval of topic prior to registration. Independent research resulting in thesis or project. Minimum of 6 units required; may be repeated to maximum of 9 units; combined units of 597, 598, and 599 may not exceed 15. Oral defense of thesis required. Graded CR/NC only.

Industrial Studies

In School of Fine and Applied Arts

The Department of Industrial Studies offers a Master of Arts degree in Industrial Arts and a Master of Arts degree in Vocational Education.

Master of Arts Degree in Industrial Arts

This program is designed to increase the effectiveness of industrial arts teachers in their professional service area by providing them an opportunity to specialize in two of three areas of interest, as follows:

Teaching Specialization with emphasis on advanced subject matter content.

Technical Specialization with emphasis on advanced subject matter preparation.

Supervision Specialization with emphasis in supervision, primarily at the department chairman level.

Admission to the Program

In addition to the University requirements for admission to graduate study, applicants must have a baccalaureate degree in a related field with a combined program of studies and industrial experience acceptable to the Department.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required.

Required in Industrial Studies (9 units):

- 485 History, Philosophy and Organization of Industrial Education (3)
- 498 Seminar: Comprehensive Career Education for Industrial Studies and Vocational Education (3)
- 502 Modern Industry (3)

Required in Educational Foundations (4 units):

- 500 Evaluation of Education Research (4)

Areas of Interest (20–24 units):

Select two of the following areas for 10–12 units in each:

TEACHING SPECIALIZATION

Select Industrial Studies 506 for 4 units and Industrial Studies 583 for 4 units; also select courses in Industrial Studies or Education for 2–4 units, with approval of adviser for total of 10–12 units.

TECHNICAL SPECIALIZATION

Select 10–12 units in 400-level Industrial Studies courses, with approval of adviser; Industrial Studies 598 may be included for 3–6 units.

SUPERVISION SPECIALIZATION

Select Industrial Studies 486 for 3 units and Industrial Studies 505 for 4 units; also select 3–5 units in Industrial Studies, Business, or Education with approval of adviser for total of 10–12 units; may include second enrollment in Industrial Studies 486.

Additional Electives (3–7 units):

Select from Industrial Studies and related fields, with approval of adviser.

Thesis or Project (5 units):

599AB Thesis or Project (2, 3)

Master of Arts Degree in Vocational Education

This program for the vocational educator offers a choice of two areas:

Technical or Professional Specialization: An in-depth study of advanced work in the vocational educator's teaching specialty.

Vocational Education Leadership Specialization: A program of study and field experience designed to prepare the professional educator for service as an administrator, supervisor, or coordinator in secondary schools, community colleges, or specialized vocational schools, and for training or related responsibilities in industry.

Admission to the Program

In addition to the University requirements for admission to graduate study, applicants must have a baccalaureate degree in Vocational Education or a combination of teaching and industrial experience and sufficient course work toward the Vocational Credential to provide a foundation for advanced study in the master of arts degree program.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required.

Required Courses (13 units):

In Industrial Studies:

- 485 History, Philosophy and Organization of Industrial Education (3)
- 486 Seminar in Vocational Education (3)
- 502 Modern Industry (3)

In Educational Foundations:

- 500 Evaluation of Education Research (4)

Areas of Interest (20–22 units):

Select one of following specializations:

TECHNICAL OR PROFESSIONAL SPECIALIZATION

Required in Industrial Studies (20–22 units):

Select 13–16 units of technical or professional courses in the vocational teacher's subject matter specialization, with approval of adviser; also select 4–9 units of Industrial Studies 598 for a total of 20–22 units.

VOCATIONAL EDUCATION LEADERSHIP SPECIALIZATION

Select Industrial Studies 505 for 4 units and Industrial Studies 598 for 6–9 units; also select 7–12 units in Industrial Studies, Education, and Business, with approval of adviser for a total of 20–22 units.

Electives (5–7 units):

Select courses outside field of Industrial Studies, with approval of adviser.

Thesis or Project (5 units):

599AB Thesis or Project (2, 3)

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

- 402 Power Transmission Systems (3)
- 403 Chassis and Suspension Systems (3)
- 404 Small Power Plants (3)
- 405 Engine Design and Performance (3)
- 411 Tool Design (3)
- 412 Manufacturing and Construction Drafting (3)
- 413 Architectural Drafting II (3)
- 415 Electromechanical Drafting and Design (3)
- 421 Communications (3)
- 422 Radio (3)
- 423 Television (3)
- 424 Industrial Controls (3)
- 425 Advanced Electronic Systems (3)
- 431 Lithography I (3)
- 432AB Typographic Layout and Design I,II (4-5)
- 433 Printing Estimating (5)
- 434 Printing Plant Management (4)
- 435 Lithography II (3)
- 436 Graphic Arts Processes (3)
- 442 Plastics Technology (3)
- 461 Molding and Casting (3)
- 463 Metal Machining I (3)
- 464 Metal Machining II (3)
- 465 Automated Metal Machining (3)
- 471 Lamination, Forming and Bonding (3)
- 472 Wood Manufacturing Technology I (3)
- 473 Wood Manufacturing Technology II (3)
- 480 Comprehensive General Shop (3)
- 483AB Construction of Teaching Aids (2-2)
- 485 History, Philosophy and Organization of Industrial Education (3)
- 486 Seminar in Vocational Education (1-4)
- 490 Advanced Problems in Industrial Studies (1-9)

- 492 Functional Photography (3)
- 493 Advanced Photography (3)
- 494 Art in Photography (3)
- 495 Advertising and Photography (3)
- 496 Motion Picture Photography (3)
- 498 Seminar: Comprehensive Career Education for Industrial Studies and Vocational Education (3)
- 499 Undergraduate Directed Study (1-4)

Graduate Courses

Classified graduate standing required for admission.

502 Modern Industry (3)

Prerequisites: Completion of an acceptable undergraduate major in Industrial Arts or Vocational Arts, or comprehensive background of industrial experience, and Industrial Studies 300AB or equivalent. Advanced study of growth, development, and organization of industry; new materials and processes. Problems of industry with significance for present social order.

505 Supervision and Organization of Vocational Education (4)

Responsibilities of supervisor for organizing vocational education programs at various levels and for improving instruction. May be repeated to maximum of 8 units with permission of instructor.

506 Seminar: Industrial Education (4)

Investigation of teaching problems in industrial education. Individual and group studies of special problems.

507 Seminar: Industrial Studies (4)

Prerequisite: Industrial Studies 502. Advanced study of developments in industrial materials, processes, machines, and equipment; relationships between industrial developments and society; emphasis on research and investigation.

583 Development, Use, Evaluation of Industrial Education Instructional Materials (4)

Advanced course in development, use and evaluation of instructional materials, with emphasis on three-dimensional teaching aids, charts, slides, and displays.

584AB Seminar: Advanced Industrial Design (2-2)

Prerequisites: Industrial Studies 144 and demonstrated graduate-level competence in design and research. Industrial design as applied to industrial objects of everyday use in materials and processes common to industry.

598 Graduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Independent study of advanced topics in field; regular conferences with sponsor. May be repeated to maximum of 9 units.

599AB Thesis or Project (1-2, 1-3)

Prerequisites: Consent of an instructor to act as sponsor and departmental approval of topic prior to registration. Independent research resulting in a thesis or project. Maximum of 5 units may be applied toward master's degree. Graded CR/NC only.

Latin American Studies

In School of Letters and Science

The Master of Arts degree program in Latin American Studies is designed to provide an area wide multidisciplinary approach to the study of one of the world's major regions. Another objective is advanced training for careers in teaching, in government service, or in commerce.

Admission to the Program

Admission is governed by the general University requirements for admission to graduate study. Application must be made to the Latin American Studies graduate studies committee on forms available from the Coordinator of Latin American Studies. Completed application, together with transcripts from all colleges attended other than Cal State L.A. must be submitted to the Coordinator of Latin American Studies. Early application is urged, since courses applicable to the degree must be arranged with the approval of a graduate adviser prior to enrollment.

Departmental Requirements

A minimum of 24 units in upper division Latin American content courses, including Latin American Studies 497 or its equivalent, are prerequisite to the program. Students who have not met this requirement through courses taken as an undergraduate must take courses in two or more departments as post-baccalaureate students. In exceptional cases the Latin American Studies graduate studies committee may waive a portion of these prerequisites.

Language Requirement

Demonstration of written and oral competence in Spanish or Portuguese must precede advancement to classified graduate standing. This is accomplished by passing a foreign language proficiency examination in the language selected, as offered by the Department of Foreign Languages and Literatures, and with approval of that department.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required.

Required in Latin American Studies (4 units):

590 Interdisciplinary Seminar in Latin American Studies (4)

Additional Seminars (16 units):

NOTE: Courses designated with an asterisk (*) may be elected in those quarters when area of emphasis is Latin America.

Select two from following:

In Business:

*543 Seminar: International Marketing (4)

In Economics:

*560 Seminar: Economic Growth in Underdeveloped Areas (4)

In Geography:

*571 Seminar: Regional Geography (4)

In History:

562 Seminar: Latin American History (4)

In Latin American Studies:

508 Seminar: Latin American Social Systems (4)

In Political Science:

531 Seminar: Latin American Government (4)

Select one from following:

In Art:

*501 Seminar: Art History (4)

In Spanish:

505 Studies in El Modernismo in Spanish America (4)

545 Seminar: Contemporary Spanish-American Poetry (4)

575 Seminar: Hispanic Literature (4)

Select one from following:

In Education:

*506 Comparative Education (4)

In Geography:

*575 Seminar: Human Geography (4)

*580 Seminar: Physical Geography (4)

In History:

561 Seminar: History of Modern Mexico (4)

Electives (21-24 units):

Select from following:

Anthropology 404, 408

Art 446

Economics 460

Geography 427, 428

History 451, 461, 462, 463, 465, 466

Latin American Studies 424, 495, 499, 598, 599

Music 476

Political Science 423, 431

Spanish 411, 413, 417, 421, 460, 483

Thesis or Comprehensive Examinations:

Comprehensive written examinations on Latin America must be passed successfully in three of the following academic fields: Anthropology, Art, Business Administration and Economics, Comparative Education, Economics, Geography, History, Political Science, or other fields approved by the graduate committee in Latin American Studies.

Students should expect to take the comprehensive examinations in the quarter in which they complete all course work on their programs and must comply with school and departmental requirements. Students must notify the Coordinator of Latin American Studies in writing of their intention to take the examinations.

Instead of the comprehensive examinations, students may choose to write an interdisciplinary thesis under the guidance of a three-member faculty committee selected in consultation with an adviser. Students making this election must enroll in Latin American Studies 599, in which a maximum of 9 units may be taken.

Immediately following completion of the comprehensive examinations or thesis, students must pass an oral examination conducted by a 3-member committee.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. Courses marked with asterisk () are accepted when subject matter relates to Latin America. For course descriptions, see undergraduate program.*

Anthropology 404, 408, 499

Art 446, 499

Chicano Studies 400, 444, 499

Economics 460, 499

Geography 427, 428, 499

History 444AB, *450, *451, 461, 462, 463, 465, 466, 499

Latin American Studies 424, 462, 495, 499

Music 476, *499

Pan-African Studies 423, 432, *499

Philosophy 433

Political Science 423, 431, *490, *493, *499

Spanish 411, 413, 417, 421, *460, 483, *499

Graduate Courses

Classified graduate standing required for admission.

508 Seminar: Latin American Social Systems (4)

Prerequisites: Anthropology 404 or 408 or equivalent and reading competence in Spanish or Portuguese. Analysis of selected aspects of contemporary Latin American social systems. May be repeated for credit.

590 Interdisciplinary Seminar in Latin American Studies (4)

Prerequisite: Latin American Studies 497. Interdisciplinary investigation and discussion of selected Latin American topics. May be repeated for credit.

598 Graduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Independent study of advanced topics in field; regular conferences with sponsor. May be repeated for credit.

599 Thesis (2-9)

Prerequisites: Consent of an instructor to act as sponsor and departmental approval of topic prior to registration. Independent research resulting in a thesis. May be repeated to maximum of 9 units. Graded CR/NC only.

Mathematics

In School of Letters and Science

The Master of Science degree in Mathematics is offered in two options. Option 1 emphasizes pure mathematics; Option 2 concentrates on applied mathematics. Both options make the student eligible for higher mathematical work in industry, business, or government, for teaching in a community college, and for further graduate work in the respective areas.

Admission to the Program

Admission is governed by the general University requirements for admission to graduate study.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required.

OPTION 1: PURE MATHEMATICS

The candidate's baccalaureate preparation should be substantially equivalent to that required for the Bachelor of Arts in Mathematics.

Required in Mathematics (16 units):

- 530 General Topology (4)
- 540 Abstract Algebra (4)
- 580 Real Analysis (4)
- 582 Advanced Complex Analysis (4)

Electives in Mathematics (9 units):

Select one from following:

- 542 Group Theory (4)
- 584 Advanced Probability Theory (4)
- 591 Functional Analysis (4)

Select one from following:

- 551 Seminar: Analysis (5)
- 552 Seminar: Algebra (5)
- 553 Seminar: Topology or Geometry (5)

Electives (20 units):

Select from 400- and 500-level courses, with approval of adviser.

All candidates must pass an oral examination given in the last quarter of candidacy. In addition, Plan A or Plan B must be performed satisfactorily.

PLAN A: Students may elect to write a thesis by registering for Mathematics 599. If the thesis is accepted, a maximum of 4 units of Mathematics 599 may be applied to the degree program.

PLAN B: A comprehensive written examination may be chosen in place of a thesis. Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

OPTION 2: APPLIED MATHEMATICS

The candidate's undergraduate preparation should be substantially equivalent to that required for the Bachelor of Science in Mathematics.

Required in Mathematics (28 units):

- 502AB Applied Linear Analysis (4-4)
- 520-21 Optimization Techniques and Control Theory I, II (4-4)
- 562 Applied Complex Variables (4)
- 570AB Advanced Numerical Analysis (4-4)

Electives (17 units):

With approval of adviser select 9 units from following, including at least 4 units of 500-level courses.

In Mathematics:

- 411 Tensor Analysis (4)
- 457 Linear Algebra (4)
- 467 Advanced Calculus III (4)
- 470 Numerical Calculus (4)
- 471 Numerical Calculus (4)
- 472 Linear Programming (4)
- 474 Theory of Probability (4)
- 475 Introduction to Mathematical Statistics (4)
- 499 Undergraduate Directed Study (1-4)
- 501 Nonlinear Differential Equations (4)
- 503 Advanced Partial Differential Equations (4)
- 570C Advanced Numerical Analysis (4)
- 598 Graduate Directed Study (1-4)

In Related Fields:

Select 8 units from 400- or 500-level courses in Business, Economics, Engineering, Mathematics, or Physics. All or part of these 8 units may be selected from Mathematics course list above.

Thesis/Comprehensive Exam (0-4 units):

All candidates must pass an oral examination and a written comprehensive examination.

Students should expect to take both examinations in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements. By invitation, students may, by writing acceptable theses, include Mathematics 599 in their programs.

Course of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

- 402A Advanced Mathematics I for Engineers and Physicists (4)
- 402B Advanced Mathematics II for Engineers and Physicists (4)
- 403 Partial Differential Equations (4)
- 405 Laplace Transform (4)

- 410 Vector Analysis (4)
- 411 Tensor Analysis (4)
- 420 Foundations of Mathematics (4)
- 430 Introduction to Modern Geometry (4)
- 431 Differential Geometry (4)
- 432 Higher Geometry (4)
- 435 Topology (4)
- 446 Theory of Numbers (4)
- 456 Modern Algebra II (4)
- 457 Linear Algebra (4)
- 463 Introduction to Complex Analysis (4)
- 466 Advanced Calculus II (4)
- 467 Advanced Calculus III (4)
- 470 Numerical Calculus (4)
- 471 Numerical Calculus (4)
- 472 Linear Programming (4)
- 474 Theory of Probability (4)
- 475 Introduction to Mathematical Statistics (4)
- 476 Introduction to Mathematical Statistics (4)
- 480 Systems Programming (4)
- 482 Programming Languages (4)
- 484 Data Structure (4)
- 490 Proseminar in Mathematics (2-5)
- 499 Undergraduate Directed Study (1-4)

Graduate Courses

Classified graduate standing required for admission.

501 Nonlinear Differential Equations (4)

Prerequisites: Mathematics 401 or 302 and 466. Vector-matrix notation, stability in nonlinear systems, Poincaré phase plane, method of Liapounov, perturbation techniques.

502A Applied Linear Analysis (4)

Prerequisites: Mathematics 255, 302 or 401, and 467 or 410. Function Spaces, convergence, inner product, bounded linear operators, integral operators and integral equations, adjoint operators, expansion in eigenfunctions, resolvent kernel.

502B Applied Linear Analysis II (4)

Prerequisite: Mathematics 502A. Unbounded operators, differential operators of second order, Sturm-Liouville operators, eigenvalues and eigenfunctions, Green's Functions, and additional topics.

503 Advanced Partial Differential Equations (4)

Prerequisites: Mathematics 401 or 302, and 403, 405, 410, 463 or equivalents. First order equations, complete and general integrals; second order equations, characteristic curves and surfaces, elliptic, hyperbolic and parabolic types.

520 Optimization Techniques and Control Theory I (4)

Prerequisites: Mathematics 255 and 466. Theory of maxima and minima, direct methods, calculus of variations, Pontryagin maximum principle.

521 Optimization Techniques and Control Theory II (4)

Prerequisite: Mathematics 520. Dynamic programming, multi-stage games, Markovian decision processes, nonlinear programming.

530 Topology (4)

Prerequisite: Mathematics 466. Basic concepts of point set topology, metrization, compactness and separation properties of spaces, mappings, combinatorial topology.

540 Abstract Algebra (4)

Prerequisite: Mathematics 456 or consent of instructor. Theory of basic algebraic structures (groups, rings, fields) with particular emphasis on groups with operators, field extensions, and Galois theory.

542 Theory of Groups (4)

Prerequisite: Mathematics 540. The group concept, subgroups, permutation groups, invariant subgroups, prime power subgroups, generators and relations, free groups, solvable groups.

551 Seminar: Analysis (5)

Prerequisites: Mathematics 580 and 582. Readings and discussions of selected topics in field.

552 Seminar: Abstract Algebra (5)

Prerequisite: Mathematics 540. Readings and discussion of selected topics in field.

553 Seminar: Topology or Geometry (5)

Prerequisite: Mathematics 530. Readings and discussion of selected topics in field.

562 Applied Complex Variables (4)

Prerequisites: Mathematics 463 and 467. Conformal mapping and quasi-conformal mapping with applications, residue problems, contour integration, harmonic functions and applications, Laplace transformation, special functions of mathematical physics.

570ABC Advanced Numerical Analysis (4-4-4)

570A: Prerequisite: Mathematics 471. Numerical solution of linear systems of equations, finite difference approximation to elliptic partial differential equations.

570B: Prerequisite: Mathematics 570A. Numerical solution of parabolic and hyperbolic partial differential equations; consistency, convergence, stability.

570C: Prerequisite: Mathematics 570B. Numerical solution of ordinary and partial differential equations, eigenvalue problems, nonlinear systems, approximation theory, finite elements, integral equations.

580 Real Analysis (4)

Prerequisite: Mathematics 467. Theory of Lebesgue measure on real line, theory of Lebesgue integral. Theorems of Holder, Minkowski, and Riesz.

582 Advanced Complex Analysis (4)

Prerequisite: Mathematics 463. Elements of plane point set topology, Cauchy-Goursat theorem, the maximum principle, the argument, harmonic functions, the reflection principle, infinite products, entire functions, Arzela's theorem, analytic continuation, elliptic functions.

584 Advanced Probability Theory (4)

Prerequisite: Mathematics 580. Probability spaces; random variables; abstract probability integrals, moments, convergence theorems; distribution and characteristic functions; central limit theorems; dependence.

591 Functional Analysis (4)

Prerequisite: Mathematics 580. Banach spaces, Hilbert spaces, linear functionals and operators, spectral theory.

598 Graduate Directed Study (1-4)

Prerequisite: Consent of instructor. Independent study of advanced topics in mathematics; regular conferences with instructor. May be repeated once.

599 Thesis (1-4)

Prerequisite: Advancement to candidacy, consent of an instructor to act as sponsor, and departmental approval of topic prior to registration. Independent research resulting in a thesis. May be repeated to maximum of 4 units. Graded CR/NC only.

Microbiology

In School of Letters and Science

The Master of Science degree in Microbiology has as its objectives: (1) to prepare for continued graduate work to the doctorate; (2) to train for positions in industry, university, hospital, and public health laboratories which require the master's degree; (3) to qualify for city, state and federal civil service positions for which the master's degree is prerequisite; (4) to qualify for the Clinical Bioanalyst (Advanced Medical Technologist) Examination, for which the master's degree and five years of experience are required; (5) to train prospective community college microbiology and medical technology teachers.

Admission to the Program

In addition to the University requirements for admission to graduate study, applicants must have an undergraduate degree in Microbiology or Bacteriology, with training equivalent to the department's bachelor's degree, and be accepted into the program by the department graduate studies committee. Also required is a 2.75 g.p.a. in the last 90 quarter units and a score of 400 on either the Verbal or Quantitative Aptitude Test of the GRE.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required.

Required Core (23 units):

The core program must include at least 14 units in 500-level courses, chosen in advance with approval of student's advisory committee, from following:

In Microbiology:

- 501 History of Microbiology (2)
- 502 Topics in Microbiology (2)
- 510 Microbial Genetics (3)
- 520 Advanced Immunology (3)
- 530 Advanced Microbial Physiology (3)

In Chemistry:

- 503 Seminar: Biochemistry (3)

Select 9 units in 400- or 500-level courses to complete core requirement, with approval of adviser.

Research and Thesis (9-15 units):

All candidates must submit an acceptable thesis based on research, and must take an oral examination in defense of the thesis.

- 597 Graduate Research (1-4)
- 598 Graduate Directed Study (1-4)
- 599 Thesis (3)

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

IN MICROBIOLOGY

- 402 Virology Laboratory (2)
- 425 Soil Microbiology (4)

IN BIOLOGY

- 402 Electron Microscopy (4)
- 412 Cytology I (4)
- 415 General Genetics (4)
- 416 Molecular Genetics (4)
- 424 General Embryology (4)
- 485 Medical Parasitology (5)

IN CHEMISTRY

- 401 Physical Chemistry I (4)
- 402 Physical Chemistry II (4)
- 420 Advanced Organic Chemistry I (4)
- 422 Organic Analysis (4)

IN PHYSICS

- 402 Radiation Biophysics (4)
- 443AB Biophysics (3-3)

IN PUBLIC HEALTH

- 401 Food Plant Sanitation (4)
- 412 Introduction to Epidemiology (4)
- 415 Vital Statistics (4)

Graduate Courses

Classified graduate standing required for admission.

501 History of Microbiology (2)

Historical developments of Microbiology.

502 Topics in Microbiology (2)

Prerequisite: Microbiology 501 or consent of graduate adviser. Special topics in Microbiology of current interest; different topic each quarter. May be repeated once. Lecture/discussion 3 hours.

510 Microbial Genetics (3)

Prerequisites: Microbiology 200AB and Biology 415. Concepts of microbial genetics, including dissociation, transformation, transduction, gene transfer, and biochemical mutation; laboratory techniques, practical aspects such as antibiotic resistance. Lecture 3 hours.

520 Advanced Immunology (3)

Prerequisite: Consent of graduate adviser. Advanced principles and concepts of immunology, fundamental biological significance of the immune reaction.

530 Advanced Microbial Physiology (3)

Prerequisite: Consent of graduate adviser. Biochemical aspects of microbial physiology and metabolism, with special emphasis on recent advances in field.

597 Graduate Research (1-6)

Prerequisite: Consent of an instructor to act as sponsor, and successful performance on departmental qualifying examination. Independent research under guidance of faculty. May be repeated to maximum of 12 units. Graded CR/NC only.

598 Graduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Directed study of advanced topics in Microbiology. May be repeated to maximum of 4 units except that combined total for 597, 598, and 599 may not exceed 15 units.

599 Thesis (1-3)

Prerequisites: Microbiology 597 and consent of an instructor to act as sponsor. Independent research resulting in a thesis. May be repeated to maximum of 3 units. Graded CR/NC only.

Music

In School of Fine and Applied Arts

The Master of Arts degree in Music is offered with two options. One is designed for students seeking a concentration in music composition, musicology, or performance; the other focuses upon music education. Adjustments in either option to meet specific interests and abilities may be made in consultation with graduate advisers.

OPTION I: MUSIC COMPOSITION, MUSICOLOGY OR PERFORMANCE

Admission to the Program

In addition to the University requirements for admission to graduate study, applicants must have a bachelor's degree in music from an accredited college or university.

Requirements for the Option

A total of 45 units, including at least 23 units in 500-level music courses, is required. Six elective units in performance may be applied toward the degree, of which a maximum of 3 may be in minor performance areas (400-level).

Required in Music (10 units):

- 465 Contemporary Techniques (4)
- 497 Research Techniques in Music (2)

Select *one* from following:

- 507 Seminar in Vocal Techniques (4)
- 569 Seminar in Composition (3)
- 597 Seminar in Musicology (4)

History and Literature (9–12 units):

Select from following:

- 457 Music of China, Korea, and Japan (4)
- 458 Music of Latin America (3)
- 470 History and Literature of Opera (3)
- 471 History and Literature of Large Vocal Forms (3)
- 472 History and Literature of Vocal Solo Music (3)
- 473 History and Literature of Symphonic Music (3)
- 474 History and Literature of Chamber Music (3)
- 475 History and Literature of Keyboard Music (3)
- 571 Music of the Renaissance (4)
- 572 Music of the Baroque Period (4)
- 573 Music of the Classical Period (4)
- 574 Music of the Romantic Period (4)
- 575 Music of Contemporary Period (4)

Performance Courses (3 units):

Select from 400- or 500-level courses.

Electives in Music (7–12 units):

Select from 400- or 500-level courses in theory, psychology of music, or advanced conducting.

Additional Electives (4–11 units):

Select courses in music or other fields, with approval of adviser.

Comprehensive Exam or Project (0, 4 units):

Comprehensive Examination

or

- 599 Thesis or Project (4)

Students may take the comprehensive examination no earlier than the quarter in which all course work is completed, but may take it subsequently. In addition to the examination, an additional 4 units in music must be taken.

An alternative to the above requirement is enrollment in 599 Thesis or Project (4).

OPTION II: MUSIC EDUCATION

Admission to the Program

In addition to the University requirements for admission to graduate study, applicants must have a bachelor's degree in Music from an accredited college or university, a valid teaching credential or concurrent enrollment in a credential program.

Requirements for the Option

A total of 45 units, including at least 23 units in 500-level music courses, is required. Six elective units in performance may be applied toward the degree; a maximum of 3 of these units may be in 400-level music performance areas.

Required in Music (14 units):

- 465 Contemporary Techniques (4)
- 497 Research Techniques in Music (2)
- 501 Psychology of Music (4)
- 502 Seminar: Music Education (4)

Seminar: Music (4 units):

Select *one* from following:

- 506 School Music Administration and Supervision (4)
- 507 Seminar in Vocal Techniques (4)
- 508 Seminar in Choral Music Education (4)
- 509 Seminar in Instrumental Music Education (4)

Music, History and Literature (8–9 units):

Select from following:

- 457 Music of China, Korea, and Japan (4)
- 458 Music of Latin America (3)
- 470 History and Literature of Opera (3)
- 471 History and Literature of Large Vocal Forms (3)
- 472 History and Literature of Vocal Solo Music (3)
- 473 History and Literature of Symphonic Music (3)
- 474 History and Literature of Chamber Music (3)
- 475 History and Literature of Keyboard Music (3)
- 571 Music of the Renaissance Period (4)
- 572 Music of the Baroque Period (4)
- 573 Music of the Classical Period (4)

574 Music of the Romantic Period (4)

575 Music of Contemporary Period (4)

Advanced Conducting (4 units):

Select one from following:

580 Advanced Choral Conducting (4)

581 Advanced Instrumental Conducting (4)

Performance Courses (3 units):

Select from 400- or 500-level courses.

Electives (7-8 units):

Select in Music or other fields, with approval of adviser.

Comprehensive Exam or Project (0, 4 units):

Comprehensive Examination
or

599 Thesis or Project (4)

Students may take the comprehensive examination no earlier than the quarter in which all course work is completed, but may take it subsequently. In addition to the examination, an additional 4 units in music must be taken.

An alternative to the above requirement is enrollment in 599 Thesis or Project (4).

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

401 Music Literature for Children (3)

402 Workshop in Elementary Music Education (3)

403 Training Select Children's Choirs (3)

404 Acoustical Analysis of Instrument Construction (3)

405 Piano Methods and Materials (3)

406 Comparative Vocal Techniques (3)

408 Analysis of Choral Literature and Performance (3)

409 Analysis of Instrumental Literature and Performance (4)

410 Orchestral Instruments (3)

415 Strings (1 or 2)

416 Woodwinds (1 or 2)

417 Brass (1 or 2)

418 Percussion (1 or 2)

419 Harp Repertoire Class (2)

420 String Ensemble (1)

421 Woodwind Ensemble (1)

422 Brass Ensemble (1)

423 Percussion Ensemble (1)

424 Stage Band (1)

425 Chamber Singers (1)

426 Opera Repertory, Performance and Production (2)

435 Voice (1 or 2)

436 Foreign Language Diction for Singers (2)

445 Piano Instruction (1 or 2)

446 Organ (1 or 2)

447 Accompanying (2)

450 History of American Music (4)

451 Contemporary American Music (4)

452 History of Jazz (4)

453 Folk and Traditional Music of the Western World (3)

456 Folk and Traditional Music of the Eastern World (3)

457 Music of China, Korea, and Japan (4)

458 Music of Latin America (3)

460 Intermediate Composition (3)

461 Choral Arranging (3)

462 Advanced Orchestration and Arranging (3)

463 Counterpoint (3)

464 Musical Form (3)

465 Contemporary Techniques (4)

466 Commercial Orchestration (3)

467 Music Composition for Television and Films (3)

468 Music Composition for the Theater (3)

469 Techniques of Electronic Music (3)

470 History and Literature of Opera (3)

471 History and Literature of Large Vocal Forms (3)

472 History and Literature of Vocal Solo Music (3)

473 History and Literature of Symphonic Music (3)

474 History and Literature of Chamber Music (3)

475 History and Literature of Keyboard Music (3)

478 Collegium Musicum I (1)

479 Music Criticism (3)

480 Choral Conducting (3)

481 Instrumental Conducting (3)

482 Rehearsal Techniques for Band Directors (4)

490 Music for Early Childhood (4)

491 Special Studies in Music (1-4)

492 Musical Creativity for Children (4)

497 Research Techniques in Music (2)

499 Undergraduate Directed Study (1-4)

Graduate Courses

Classified graduate standing in Music or equivalent music background required for admission.

501 Psychology of Music (4)

Prerequisites: Music 497, introductory course in psychology or educational psychology, and at least 30 units in music. Musical personality, perception of musical characteristics, musical taste, and theories of learning applied to music; survey of standardized tests of musical aptitude and achievement.

502 Seminar: Music Education (4)

Prerequisites: Music 497, baccalaureate degree with major in music education and at least one year of teaching experience. Evaluation of research and various philosophies, methods, and trends in music education.

506 School Music Administration and Supervision (4)

Prerequisite: Music 497. Administrative and supervisory responsibilities of music educator; leadership in personal relations, curriculum, improving instruction, public relations, scheduling, budget and finance, equipment, materials, supplies, space and housing.

507 Seminar: Vocal Techniques (4)

Prerequisite: Music 406 or consent of instructor. Seminar and critique on psycho-physiological approach to vocal technique. Designed for experienced teachers, soloists, and choir directors. Individual research and class demonstration.

508 Seminar: Choral Music Education (4)

Prerequisites: Music 408 or equivalent and 498. Survey and criteria for selection and interpretation of chorus and vocal ensemble music.

509 Seminar: Instrumental Music Education (4)

Prerequisites: Music 407 or 409 or equivalent and 498. Survey and criteria for selection and interpretation of instrumental music.

519 Applied Music, Orchestral Instruments (1)

Prerequisite: Consent of instructor. Lessons on campus with approved instructors. May be repeated to maximum of 6 units.

539 Applied Music, Voice (1)

Prerequisite: Consent of instructor. Lessons on campus with approved instructors. May be repeated to maximum of 6 units.

549 Applied Music, Keyboard Instruments (1)

Prerequisite: Consent of instructor. Lessons on campus with approved instructors. May be repeated to maximum of 6 units.

560 Advanced Composition (4)

Prerequisite: Music 460 or equivalent. Free composition in selected vocal and instrumental forms. May be repeated to maximum of 12 units.

569 Seminar: Composition (4)

Prerequisites: Music 497 and 560. Philosophies and esthetic theories involved in contemporary music; compositional problems and projects of an advanced nature intended to synthesize previous creative skills and techniques. May be repeated to maximum of 8 units.

571 Music of Renaissance Period (4)

Discussion of stylistic characteristics of music of Renaissance; formal, technical, and thematic score analysis of representative works, accompanied by live or recorded performance.

572 Music of Baroque Period (4)

Stylistic analysis of instrumental and vocal music, including study of performance practices of the period.

573 Music of Classic Period (4)

Stylistic characteristics of Classic Period, based on analysis of representative works.

574 Music of Romantic Period (4)

Stylistic characteristics of Romantic Period, based on analysis of representative works.

575 Music of Contemporary Period (4)

Stylistic characteristics of contemporary music; survey and analysis of representative works; music in relation to twentieth century arts and society.

579 Seminar: Musicology (4)

Prerequisite: Music 497. Specific musicological problems reported by students and discussed by class. May be repeated to maximum of 12 units.

580 Advanced Choral Conducting (4)

Prerequisite: Music 480 or equivalent. Analysis of conducting problems of standing choral literature, including both accompanied and unaccompanied music; study of metric relationships, less frequently used conducting patterns, and survey of literature.

581 Advanced Instrumental Conducting (4)

Prerequisite: Music 497 or equivalent. Analysis and preparation for conducting major works for symphonic band and orchestra. Opportunity to conduct university orchestra or band.

598 Graduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Independent study of advanced topics in field; regular conferences with sponsor. May be repeated to maximum of 12 units.

599 Thesis or Project (1-4)

Prerequisites: Music 497 and consent of an instructor to act as sponsor, and departmental approval of topic prior to registration. Independent research resulting in a thesis or project. Must be repeated to maximum of 4 units. Graded CR/NC only.

Nursing

In School of Fine and Applied Arts

The Master of Science degree in Nursing provides advanced study in two areas of concentration: (1) nursing care of the child, and (2) nursing care of adults. Study may be directed toward development of a functional area as teacher, consultant, administrator, clinical specialist, or investigator.

Seminars in the area of concentration emphasize psychosociological reactions of individuals receiving nursing care and associated therapeutic behavior of the nurse. Clinical laboratory assignments are directed toward meeting individual goals of students relative to their clinical specialization and functional interest.

Students seeking the credential to teach nursing in community colleges should consult the Coordinator of Community College Education in the Department of Secondary Education and an adviser in the Department of Nursing.

The master's program is accredited by the National League for Nursing.

Admission to the Program

Applicants must meet the following prerequisites and criteria: (1) equivalent of requirements for Bachelor of Science degree in Nursing in effect at the time of admission as a graduate; (2) minimum 3.0 cumulative grade point average in nursing courses taken at the undergraduate upper division level or permission of the departmental graduate studies committee; (3) 2.75 g.p.a. in the last 90 quarter units; (4) score of 400 on either the Quantitative or Verbal section of the Aptitude Test of the Graduate Record Examination; (5) minimum of 4 quarter units in an upper division statistics course, which may be taken concurrently with Nursing 490 or with electives; (6) current license to practice nursing in California; and (7) malpractice insurance for professional nursing practice.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required.

Required Core Courses (7-10 units):

- 490 Introduction to Nursing Research (3)
- 570 Seminar: Methodology of Nursing Research (3)
- 597 Graduate Research (1-4)

Area of Specialization (10 units):

Select one of following areas:

CONCENTRATION IN NURSING CARE OF THE CHILD

- 520 Seminar: Nursing Responses to Behavior Modifications of Infancy Through Pre-School Age Children (3)
- 521 Seminar: Nursing Responses to Behavior Modifications in School Age Through Adolescence (3)
- 595 Advanced Field Study (2-2)

Must be taken with each seminar.

CONCENTRATION IN NURSING CARE OF THE ADULT

- 530 Seminar: Nursing Responses to Behavior Modifications in Early and Middle Adulthood (3)
- 531 Seminar: Nursing Responses to Behavior Modifications in Later Adulthood (3)
- 595 Advanced Field Study (2-2)

Must be taken with each seminar.

Functional Area (6 units): Select one of following areas:
Nursing Administration:

- 540 Human Resource Utilization in Health Care Organization (2)
- 542 Seminar: Health Care Management (2)
- 595 Advanced Field Study (2)

Nursing Education:

- 560 Development of Educational Programs in Nursing (4)
- 595 Advanced Field Study (2)

Clinical Specialization:

- 598 Graduate Directed Study (4)
- 595 Advanced Field Study (2)

Electives (16-22 units):

Select with approval of adviser; no more than 8 units may be in nursing courses.

Comprehensive Exam or Thesis/Project (0, 3 units):

Comprehensive Examination

or

- 599 Thesis or Project (3)

Students selecting the comprehensive examination should expect to take it in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

- 400 Nursing Care in Acute Cardio-respiratory Crises (4)

- 401 Medical Intensive Care Laboratory (4)
- 402 Cardiac Arrhythmia Detection (2)
- 403 Postsurgical Intensive Care Laboratory (4)
- 404 Nursing Care in Acute Neurometabolic Crises (2)
- 405 Laboratory in Selected Areas of Physiological Crisis (4)
- 406 Traumatic Injuries (2)
- 407 Neonatal ICU Laboratory (4)
- 408 Critical Care of Neonate (2)
- 410 Health Assessment and Health Maintenance of the Aging Patient (3)
- 411 Laboratory in Health Assessment and Health Maintenance (4)
- 414AB Nursing in Public School Health Programs (5-5)
- 420 Ambulatory Health Care I: Infancy through Pre-School (4)
- 421 Pediatric Appraisal Laboratory (4)
- 430 Concepts of Health Guidance During Pregnancy (4)
- 431 Laboratory in Concepts of Health Guidance During Pregnancy (4)
- 440 Introduction to Community Mental Health (2)
- 444 Assessment of the Individual (2)
- 445 Clinical Laboratory in Mental Health: Individual and Group Treatment (4)
- 446 Differential Diagnosis (2)
- 447 Clinical Laboratory in Mental Health: Family Therapy and Behavioral Techniques (4)
- 448 Therapeutic Strategies in Mental Health (4)
- 449 Advanced Clinical Laboratory in Mental Health (4)
- 454 Selected Topics in Nursing (1-6)
- 460 Problems in Parenting (2)
- 462 Behavior Modification in Health Care (4)
- 464 Family Interaction Problems (2)
- 466 Crisis Intervention (4)
- 490 Introduction to Nursing Research (3)
- 492 Special Topics in Nursing (4)
- 494 Legal Aspects of Health Care/Provision in California (3)
- 499 Undergraduate Directed Study (1-4)

Graduate Courses

Classified graduate standing required for admission.

520 Seminar: Nursing Responses to Behavior Modifications of Pre-School Children (3)

Prerequisites: Nursing 490 and consent of instructor; concurrent enrollment in Nursing 595. Nursing responses to biopsychosocial behavior modifications resulting from illness and hospitalization. Emphasis on infancy and pre-school years. Preparation for seminar will be guided investigation in student's area of special interest.

521 Seminar: Nursing Responses to Behavior Modifications Through Adolescence (3)

Prerequisites: Nursing 490 and consent of instructor; concurrent enrollment in Nursing 595. Nursing responses to biopsychosocial behavior modifications resulting from illness and hospitalization. Emphasis on school-age children and adolescents. Preparation for seminar will be guided in student's area of special interest.

522 Seminar: Nursing Responses to Child Behavior Modifications in Varied Clinical Settings (3)

Prerequisites: Nursing 490 and consent of instructor; concurrent enrollment in Nursing 595. Nursing responses to behavior modifications of children in varied clinical settings; emphasis on teaching, supervising, consultant, and nurse specialist roles. Preparation for seminar will be guided study of these roles as implemented in the student's area of special interest.

530 Seminar: Nursing Responses to Behavior Modifications in Early and Middle Adulthood (3)

Prerequisites: Nursing 490 and consent of instructor; concurrent enrollment in Nursing 595. Nursing responses to biopsychosocial behavior modifications resulting from illness and hospitalization. Emphasis on early and middle adulthood. Preparation for seminar will be guided investigation into student's area of special interest.

531 Seminar: Nursing Responses to Behavior Modifications in Late Adulthood (3)

Prerequisites: Nursing 490 and consent of instructor; concurrent enrollment in Nursing 595. Nursing responses to biopsychosocial behavior modifications resulting from illness and hospitalization; emphasis on later adult years. Preparation for seminar will be guided investigation into student's area of special interest.

532 Seminar: Nursing Responses to Adult Behavior Modifications in Varied Clinical Settings (3)

Prerequisites: Nursing 490 and consent of instructor; concurrent enrollment in Nursing 595. Nursing responses to adult behavior modifications in various clinical settings; emphasis on teaching, supervisory, consultant and nurse specialist roles. Preparation for seminar will be guided study of these roles in student's area of special interest.

540 Human Resource Utilization in Health Care Organization (2)

Prerequisite: Classified graduate standing in Nursing or other health-related program. Analysis of procedures in health care personnel practices: licensure, recruitment, hiring, staffing, continuing education, performance evaluation, incentive plans; changing roles among health care personnel.

542 Seminar: Health Care Administration (2)

Prerequisite: Classified Graduate standing in Nursing or other health-related program. Administrative issues in health care settings: goal complexity, power distribution, administrative-professional conflict, decision making process, introduction of change; systems concept as assessment tool; interdependence of management team members in a health agency.

560 Development of Educational Programs in Nursing (4)

Prerequisite: Concurrent enrollment in Nursing 595; Educational Foundations 413 or Psychology 424AB recommended. Purposes, functions and structures of nursing education programs, including delineation of content for different levels of practice.

570 Seminar: Methodology of Nursing Research (3)

Prerequisites: Nursing 490 and consent of instructor. Defining researchable nursing problems, hypothesis formulation, observational techniques, design and sampling.

595 Advanced Field Study (2)

Prerequisites: Concurrent enrollment in one of following Nursing seminars: 520, 521, 530, 531, 542, 560, and consent of instructor. Experience in specialized clinical and functional areas assigned on an individual basis. Weekly tutorial sessions required for student-teacher synthesis of data from concurrent seminar and field experience. Must be repeated with each nursing seminar.

597 Graduate Research (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Independent research under guidance of faculty sponsor. May be repeated for credit. Graded CR/NC only.

598 Graduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Directed study of advanced topics in field; regularly scheduled conferences with sponsor. May be repeated to maximum of 8 units.

599 Thesis or Project (1-3)

Prerequisites: Advancement to candidacy, completion of Nursing 490, 570, and 597, consent of an instructor to act as sponsor, and departmental approval of topic prior to registration. Independent research resulting in a thesis or project. Must be repeated to maximum of 3 units. Graded CR/NC only.

Philosophy

In School of Letters and Science

The Master of Arts degree in Philosophy is designed to prepare students for community college teaching and for further graduate study. In some specific areas of philosophy, opportunities are also available in institutions engaged in basic research.

Admission to the Program

In addition to the University requirements for admission to graduate study, applicants must possess a bachelor's degree in Philosophy or a bachelor's degree with a major in a field other than philosophy supplemented by appropriate preparation in philosophy. Also required is a score of 400 on either the Verbal or Quantitative Aptitude Test of the GRE. Applicants must consult an adviser in philosophy before admission to the program to determine whether any academic deficiencies exist.

Requirements for the Degree

A total of 45 units, including at least 36 units in philosophy, of which at least 23 units must be in 500-level courses, is required.

Students are required to include in their programs the following philosophy courses, if these or equivalent courses have not been completed prior to admission to the program.

- 405 Symbolic Logic (4)
- 460 Metaphysics (4)
- 470 Theory of Knowledge (4)

Comprehensive Examinations:

Students should expect to take the comprehensive examinations in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements. Students will be required to pass comprehensive examinations in three of the following four areas: (1) History of Philosophy (ancient, modern and either medieval or recent); (2) Metaphysics and theory of knowledge; (3) Logic and either philosophy of science or philosophy of language; (4) Ethics and either aesthetics or social and political philosophy.

Students should be guided in selection of courses by specific needs they will have in preparing for the comprehensive examinations. Electives taken outside philosophy, if any, must be relevant to one of the three areas in which students elect to be examined.

Students who fail to pass one area of the comprehensive examinations will be permitted to take that specific exam again. Students who fail two areas of the comprehensive examination must take all three examinations again. Students who fail a comprehensive exam in the same area for a second time will be disqualified from the program.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

- 404 Inductive Logic (4)
- 405 Symbolic Logic (4)
- 406 Advanced Logic (4)
- 410 Social and Political Philosophy (4)
- 412 Philosophical Issues in Feminism (4)
- 415 Philosophy of Religion (4)
- 420 Contemporary Ethical Theory (4)
- 425 Philosophy of History (4)
- 430 American Philosophy (4)
- 433 Latin American Philosophy (4)
- 436 Philosophy of India (4)
- 437 Philosophy of China and Japan (4)
- 440 Contemporary Philosophy (4)
- 445 Existentialism (4)
- 446 Phenomenology (4)
- 450 Plato (4)
- 451 Aristotle (4)
- 455 Continental Rationalism (4)
- 456 British Empiricism (4)
- 457 Kant (4)
- 460 Metaphysics (4)
- 470 Theory of Knowledge (4)
- 471 Philosophy of Mind (4)
- 474 Philosophy in Literature (4)
- 475 Aesthetics (4)
- 480 Philosophy of Language (4)
- 485 Philosophy of Science (4)
- 490 Philosophy of Law (4)
- 495 Proseminar: Selected Works in Philosophy (4)
- 499 Undergraduate Directed Study (1-4)

Graduate Courses

Classified graduate standing required for admission.

510 Seminar: History of Philosophy (4)

Prerequisite: At least 12 units in history of philosophy. Advanced study of selected figures and problems in history of philosophy. May be repeated as subject matter changes.

521 Seminar: Logic (4)

Prerequisite: Philosophy 404 or 405. Advanced study of selected problems in deductive or inductive logic. May be repeated as subject matter changes.

523 Seminar: Philosophy of Language (4)

Prerequisite: Philosophy 405 or 480. Advanced study of selected problems in philosophy of language. May be repeated as subject matter changes.

525 Seminar: Philosophy of Science (4)

Prerequisite: Philosophy 404, 405, or 485. Advanced study of selected problems in philosophy of the sciences, including mathematics, natural sciences, psychology, social sciences. May be repeated as subject matter changes.

531 Seminar: Metaphysics (4)

Prerequisite: Philosophy 460. Advanced study of selected problems in metaphysics. May be repeated as subject matter changes.

532 Seminar: Theory of Knowledge (4)

Prerequisite: Philosophy 470. Advanced study of selected problems in theory of knowledge. May be repeated as subject matter changes.

541 Seminar: Ethics (4)

Prerequisite: Philosophy 420. Advanced study of selected problems in ethics and meta-ethics. May be repeated as subject matter changes.

542 Seminar: Aesthetics (4)

Prerequisite: Philosophy 475. Advanced study of selected problems in aesthetics. May be repeated as subject matter changes.

545 Seminar: Social and Political Philosophy (4)

Prerequisite: Philosophy 410 or 490. Advanced study of selected problems in social, political, and legal philosophy. May be repeated as subject matter changes.

598 Graduate Directed Study (1-4)

Prerequisite: Consent of a faculty sponsor before registration. Independent study of advanced topics in field; regular conferences with the sponsor. May be repeated for credit.

Physical Education and Athletics

In School of Fine and Applied Arts

The Master of Arts degree in Physical Education is designed to provide teachers and administrators experience in analyzing critically the problems in testing, programming, administering and teaching physical education programs in secondary schools. It adds depth to the professional preparation of leaders in the field and serves as a basis for further study. Students elect one of three areas of specialization: administration and supervision, motor performance, or dance.

Admission to the Program

Applicants must have adequate undergraduate preparation in physical education and a 2.75 g.p.a. in the last 90 quarter units.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required.

Physical Education 401 or its equivalent is required for advancement to candidacy for all students. Students in motor performance area of specialization must also take Physical Education 439 or its equivalent.

Physical Education 502 is prerequisite or corequisite to all other 500-level courses in physical education, and must be taken in first quarter of enrollment in 500-level courses.

Required in Physical Education (13 units):

- 502 Seminar: Research in Current Literature (3)
- 503AB Scientific Bases of Physical Education (3-2)
- 504AB Philosophical Bases of Physical Education (3-2)

Area of Specialization (9-10 units):

Select three courses from one of following areas:

ADMINISTRATION AND SUPERVISION

- 510 Seminar: Supervision of Instruction in Physical Education (3)
- 511 Seminar: Administration of Physical Education (3)
- 515 Program Planning in Physical Education (3)
- 516 Problems in Intramural Sports (3)
- 517 Problems in Athletics (3)

MOTOR PERFORMANCE

- 455 Motor Assessment for Exceptional Students (4)
- 521 Problems in Physical Conditioning (3)
- 524 Seminar: Advanced Kinesiology (3)
- 526 Seminar: Problems in Adapted Physical Education (3)
- 528 Seminar: Motor Learning (3)

DANCE

- 474 Critical Analysis of Dance (3)
- 572 Seminar: Research of Dance Literature (3)
- 578 Choreography for the Camera (3)

P.E. 473, 475 and 477 may not be used for elective credit in the Dance area of specialization.

Electives (17-23 units):

Select with approval of adviser.

Comprehensive Exam or Thesis/Project (0, 5 units):

Comprehensive Examination

or

599 Thesis or Project (5)

Students selecting the comprehensive examination should expect to take it in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements. The comprehensive examination consists of two parts, one in the required sequence and the other in the student's area of specialization.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

- 405 Water Safety for Instructors (3)
- 416 Sports Officiating for Men: Fall Sports (2)
- 417 Sports Officiating for Men: Spring Sports (2)
- 418 Sports Officiating for Women: Volleyball and Basketball (2)
- 419 Sports Officiating for Women: Softball and Swimming (2)
- 420 Movement Experiences in Growth and Development (3)
- 433 Motor Learning (3)
- 439 Statistical Procedures and Experimental Design in Physical Education (3)
- 450 Dimensions of Physical Education for Exceptional Children (4)
- 452 Physical Education for Mentally Retarded (4)
- 454 Special Topics in Physical Education (3-4)
- 455 Motor Assessment for Exceptional Students (4)
- 460 Outdoor Education (3)
- 461 Theory and Analysis of Team Sports (3 each)
- 463 Theory and Analysis of Dance (3 each)
- 465 Theory and Analysis of Individual Sports (3 each)
- 471 Rhythmic Form and Analysis for Dance (3)
- 472 Choreographic Theories and Composition (3)
- 474 Critical Analysis of Dance (3)
- 495 Special Studies in Physical Education (3)
- 496 Special Projects (1-3)

Graduate Courses

Classified graduate standing required for admission.

502 Seminar: Research in Current Literature (3)

Prerequisite: Undergraduate major or minor in physical education or consent of instructor. Analysis, evaluation, and interpretation of research studies and investigation in physical education.

503AB Seminar: Scientific Bases of Physical Education (3-2)

Prerequisite: Physical Education 502 (may be taken concurrently) or consent of instructor. Critical analysis of kinesio-physiological bases of physical education with special attention to concepts from which principles and criteria of profession are derived.

504AB Seminar: Philosophical Bases of Physical Education (3-2)

Prerequisite: Physical Education 502 (may be taken concurrently) or consent of instructor. Critical analysis of individual's philosophy of physical education through study of the heritage, purposes, values, and basic beliefs of physical education.

510 Seminar: Supervision of Instruction in Physical Education (3)

Prerequisite: Physical Education 502 (may be taken concurrently) or consent of instructor. History, philosophy, principles, and techniques of supervising physical education in elementary and secondary schools; professional qualities and preparation of supervisors.

511 Seminar: Administration of Physical Education (3)

Prerequisite: Physical Education 502 (may be taken concurrently), or consent of instructor. Theory and practice of administration of physical education departments at elementary, secondary, and college levels.

515 Program Planning in Physical Education (3)

Prerequisite: Physical Education 502 (may be taken concurrently) or consent of instructor. History, background, philosophy, and current types of instructional programs in physical education at elementary and secondary school levels; methods of planning functional physical education curricula.

516 Problems in Intramural Sports (3)

Prerequisite: Physical Education 502 (may be taken concurrently) or consent of instructor. Comprehensive study of current problems in planning, organization, and administration of intramural sports programs in elementary and secondary schools and in college situations.

517 Problems in Athletics (3)

Prerequisite: Physical Education 502 (may be taken concurrently) or consent of instructor. Current problems and recent trends in conduct of athletic programs; principles, policies and procedures of organization and administration of competitive athletics.

521 Seminar: Physical Conditioning (3)

Prerequisite: Physical Education 503AB or consent of instructor. Analysis of rationale of various methods of physical conditioning for physical education programs at elementary, secondary, and college levels.

524 Seminar: Advanced Kinesiology (3)

Prerequisite: Physical Education 503QAB or consent of instructor. Intensive study of anatomical and mechanical characteristics of complex human motor skills.

526 Seminar: Problems in Adapted Physical Education (3)

Prerequisite: Physical Education 502 (may be taken concurrently). Individual investigation of problems in administration, supervision, instruction, curriculum, and evaluation of adapted physical education.

528 Seminar: Motor Learning (3)

Prerequisites: Physical Education 503AB. Intensive study of nature, bases, and characteristics of human movement and acquiring of motor skills.

572 Seminar: Research of Dance Literature (3)

Prerequisite: Physical Education 502 (may be taken concurrently) or consent of instructor. Library research in dance literature; survey of scope of writings in various areas of dance and creative movement; emphasis on current publications. Individual research projects.

578 Choreography for Camera (3)

Prerequisite: Physical Education 472 or consent of instructor; Broadcasting 201 recommended. Investigation and application of choreographic principles appropriate to television and/or cinema. Lecture 2 hours, laboratory 2 hours.

597 Graduate Research (1-5)

Prerequisites: Physical Education 502, consent of advisor, and departmental approval prior to registration. Investigation of a research problem in motor performance under guidance of faculty. May be repeated for credit; combined total units of Physical Education 597 and 598 may not exceed 12. Graded CR/NC only.

598 Graduate Directed Study (1-4)

Prerequisites: Physical Education 502 and consent of an instructor to act as sponsor. Independent study of advanced topics in field; regular conferences with sponsor. May be repeated for credit.

599 Thesis or Project (1-5)

Prerequisites: Advancement to candidacy, consent of an instructor to act as sponsor, and departmental approval of topic prior to registration. Independent research resulting in a thesis or project. Must be repeated to maximum of 5 units. Graded CR/NC only.

Physics

In School of Letters and Science

The Master of Science degree in Physics is designed to prepare students for community college teaching, employment in industry, or further graduate study toward the doctorate in Physics.

Admission to the Program

Applicants must meet the University requirements for admission to graduate study. Before undertaking required graduate courses, students must complete the equivalent of an undergraduate major in Physics, and must have specific competence in the subjects covered in Physics 206, 425AB, 426AB, and 432AB.

New graduate students must consult with the departmental graduate adviser before registration, for assistance in planning their programs.

Students should achieve classified graduate standing as early as practicable in their graduate study, since it is prerequisite to the completion for credit of any courses in the degree program.

Requirements for the Degree

A total of 45 units, including at least 23 in 500-level courses, is required. Advancement to candidacy is prerequisite to filing the thesis or taking the comprehensive examination. Students should apply for candidacy immediately upon completing 16 units of their official program with the required grade point average.

Required in Physics (25 units):

- 510AB Mathematical Methods of Physics (4-4)
- 530AB Classical Physics (4-4)
- 532AB Quantum Mechanics (4-4)
- 542 Physics Research Conference (1)

Minimum of 1 quarter required.

Elective Options (20 units):

Students select Option A or Option B, for completion of program. Option A emphasizes research, leading to a thesis. Option B emphasizes advanced study, which may be taken in a variety of physics areas. For special professional objectives, students may substitute 9 units of graduate-level work in another science or mathematics area in place of Option A or B, with approval of adviser.

A. RESEARCH OPTION

Required in Physics (9 units):

Select from following:

- 597 Graduate Research (1-4)
- 598 Graduate Directed Study (1-4)
- 599 Thesis (4)

Electives (11 units):

Select with approval of adviser.

B. COURSE OPTION

Required in Physics (9-12 units):

Select three from following:

- 411 Astrophysics (3)
- 428 Statistical Physics (3)
- 431 Modern Optics (3)
- 433 Solid State Physics I (4)
- 434 Solid State Physics II (4)
- 443AB Biophysics (3-3)
- 444 Nuclear Physics I (4)
- 445 Nuclear Physics II (4)
- 469 Physical Electronics (3)
- 471 Advanced Physics Laboratory II (3)
- 491 Topics in Contemporary Experimental Physics (3)
- 492 Topics in Contemporary Theoretical Physics (3)
- 512AB Modern Physics (4-4)
- 533 Solid State Theory (4)
- 542 Physics Research Conference (1)

Second Enrollment

- 544 Theoretical Nuclear Physics (4)

Electives (8-11 units):

Select with approval of adviser.

Comprehensive Examination:

All candidates must pass an examination administered by the Department of Physics. For students who elect Option A (Research), this is an oral examination based on the thesis. For students who elect Option B (Course), this is a comprehensive examination on graduate-level physics.

Normally it will be a three-hour written examination which may be supplemented by an oral examination at the discretion of the examining committee. The examination will be given at least twice a year as announced by the Department of Physics.

Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers.

- 411 Introduction to Astrophysics (3)
- 428 Statistical Physics (3)
- 431 Modern Optics (4)
- 433 Solid State Physics I (4)
- 434 Solid State Physics II (4)
- 443AB Biophysics (3-3)
- 444 Nuclear Physics I (4)

- 445 Nuclear Physics II (4)
- 465 Applications of Group Theory to Chemistry and Physics (4)
- 469 Physical Electronics (3)
- 471 Advanced Physics Laboratory II (3)
- 488 Modern Topics in General Relativity (3)
- 491 Topics in Contemporary Experimental Physics (3)
- 492 Topics in Contemporary Theoretical Physics (3)

Graduate Courses

Classified standing required for admission.

510AB Mathematical Methods of Physics (4-4)

Prerequisites: Physics 410AB, 425AB, and 426AB or equivalents. Intended for beginning graduate students. Problem-solving using techniques current in theoretical physics. Series, integration, complex variables, integral transforms, matrices, eigenvalues, special functions, integral equations, numerical methods, probability, tensors.

512AB Modern Physics (4-4)

Prerequisites: Physics 425AB and 426AB or equivalents.

512A: Hydrogen atom, atomic spectroscopy, electron shell structure, molecular binding, quantum statistics, theory of solids.

512B: X-rays, properties of nuclei, radioactivity, nuclear forces, elementary particles, cosmic rays, nuclear astrophysics.

530AB Classical Physics (4-4)

Prerequisites: Physics 425AB and 426AB; or equivalent; 510AB (may be taken concurrently). Unified treatment of advanced topics in classical physics, including Lagrange's and Hamilton-Jacobi theory, special relativity, electrodynamics, radiation theory.

532AB Quantum Mechanics (4-4)

Prerequisites: Physics 432AB or equivalent; 510AB (may be taken concurrently).

532A: Formal structure of quantum mechanics, hermitian operators, Schrödinger theory and applications to soluble systems; angular momentum and rotation matrices.

532B: Scattering theory and phase-shift analysis, matrix mechanics, spin, permutation symmetry and identical particles, approximation methods.

533 Solid State Theory (4)

Prerequisites: Physics 432AB and 510AB; 433 or equivalent recommended. Use of quantum field theory and group theory for development of solid state topics such as band theory, transport processes, and collective particle phenomena.

542 Physics Research Conference (1)

Weekly meetings of faculty and students for report and discussion of recent developments in physics. Includes presentations by faculty, advanced students, or invited speakers. May be repeated to maximum of 2 units. Graded CR/NC only.

544 Theoretical Nuclear Physics (4)

Prerequisites: Physics 510AB and 532A. Selected topics from theory of nuclear models, nuclear reactions, and symmetry properties of elementary particles.

597 Graduate Research (1-4)

Prerequisites: Consent of a faculty sponsor and departmental approval of project prior to registration. Independent research, under guidance of the faculty. May be repeated for credit. Graded CR/NC only.

598 Graduate Directed Study (1-4)

Prerequisite: Consent of a faculty sponsor before registration. Independent study of advanced topics in the field; regular conferences with the sponsor. May be repeated for credit.

599 Thesis (1-4)

Prerequisites: Advancement to candidacy, consent of a faculty sponsor, and departmental approval of topic prior to enrollment in course. Independent research resulting in a thesis. May be repeated to maximum of 9 units. Graded CR/NC only.

Political Science

In School of Letters and Science

Two master's degree programs are offered in Political Science, in order to satisfy different kinds of career objectives of graduate students. The Master of Arts degree emphasizes advanced studies for those interested in teaching, or preparing for doctoral studies in political science, or preparing themselves for political journalism, similar occupations, or various forms of citizen leadership. The Master of Science degree in Public Administration provides present and future public service employees with the administrative skills and knowledge necessary for competent direction of personnel, administration of financial controls, and coordination of agency functions.

Master of Arts Degree

The degree program is built upon the foundation of an undergraduate major in Government or Political Science and is designed to provide systematic study in government and related fields at an advanced level.

Admission to the Program

An acceptable undergraduate program in government or political science, or approval of the graduate admissions committee, is required. Application must be made to both the Department of Political Science and the University on forms available from the department's graduate admissions committee.

Completed applications together with transcripts from all colleges attended, Graduate Record Examination scores, and two letters of recommendation (graduates of Cal State L.A. submit the names of two Cal State L.A. faculty members) must be received by the graduate admissions committee before April 1 for admission to Summer Quarter, July 1 for Fall Quarter, November 1 for Winter Quarter, and January 1 for Spring Quarter. Applicants must also comply with University admissions deadlines.

Departmental Requirements

In addition to the University requirements for admission to graduate study, applicants must have a 3.0 grade point average in the last 60 semester or 90 quarter units. Applicants who have not completed an undergraduate major in Government or Political Science or whose grade point average is below that required for regular admission may be admitted at the discretion of the department's graduate admissions committee.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required.

Choice of Fields

Three fields for the program must include Political Theory. The remaining fields must include at least one of the following:

Comparative Government
International Relations
Politics and Legislation
Public Administration
Public Law

When appropriate, students may choose one related outside field of graduate study in another discipline.

Programs must include at least 4 units of 500-level courses in each of the three fields selected.

Required in Political Science (4 units):

510 Seminar: Political Theory (4)

Electives in Political Science (8 units):

With approval of adviser, select courses from two of following fields:

Public Administration

560 Seminar: Public Administration (4)

561 Seminar: State and Local Government and Administration (4)

563 Seminar: Advanced Problems in Public Personnel Administration (4)

564 Seminar: Bureaucratic Systems (4)

590 Seminar: Philosophy of Public Service (4)

591 Seminar: Administrative Theory and Behavior (4)

595 Selected Issues in Public Administration (4)

Politics and Legislation

505 Seminar: Contemporary American Government (4)

518 Seminar: Political Behavior (4)

Comparative Government

530 Seminar: Comparative Government (4)

531 Seminar: Latin-American Government (4)

International Relations

527 Seminar: Advanced Studies in International Relations (4)

Public Law

540 Seminar: Public Law (4)

Additional Seminar (4 units):

Select one additional field from above, or a 500-level course from History, Economics, Sociology, Geography, or Social Science.

Electives (26-30 units):

Select courses in Political Science or related fields at the 400- or 500-level with approval of adviser. Four units of Political Science 599 may be included.

Comprehensive Examinations:

Comprehensive examinations demonstrating the student's competence in three selected fields, one of which may be in a related discipline, and in the overall field of Political Science are required. A thesis in lieu of the written examinations but not the oral comprehensive will be authorized for students who present a project which the department deems worthy of study.

Students should expect to take the comprehensive examinations in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements. Political Science 599 is required of all students authorized to submit a thesis.

Master of Science Degree

The degree program in Public Administration consists of core requirements and other graduate work selected to assist students in meeting their study objectives.

Admission to the Program

A bachelor's degree in Political Science or in related fields is required.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required.

In addition to course requirements, students must complete a one-year internship in public administration or an approved field project. This requirement may be waived if the candidate holds, or has held, a position entailing managerial or administrative responsibilities in a public agency.

Required in Political Science (16 units):

560 Seminar: Public Administration (4)

or

561 Seminar: State and Local Government and Administration (4)

590 Seminar: Philosophy of Public Service (4)

Select two from following:

563 Seminar: Advanced Problems in Public Personnel Administration (4)

564 Seminar: Bureaucratic Systems (4)

566 Seminar: Public Budgeting and Financial Administration (4)

568 Seminar: Community Development Administration (4)

591 Seminar: Administrative Theory and Behavior (4)

595 Selected Issues in Public Administration (4)

Required in Political Science (4 units):

480 Advanced Quantitative Methods in Political Science and Public Administration (4)

Electives (25 units):

Select a minimum of 7 units of 500-level courses in Political Science or related fields with approval of adviser.

Comprehensive Exam/Thesis (0,5 units):**Comprehensive Examination**

or

599 Thesis (5)

Students should expect to take the comprehensive examinations in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

A thesis in lieu of the written examinations may be authorized for exceptional students who present a project which the department deems worthy of study, but only if the student can indicate in an oral examination competence in the field of public administration. Political Science 599 is required of all students planning to submit a thesis.

Courses of Instruction**400-level Courses**

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

402 Public Opinion and Electoral Behavior (4)

403 State and Local Government (4)

404 Urban Government and Politics (4)

409 Foundations of Empirical Political Theory (4)

410 Classical Political Theory (4)

411 Modern Political Theory (4)

413 American Political Thought (4)

414 Interest Groups (4)

415 Political Sociology (4)

416 The Executive Process (4)

417 Public Policy and the Economy (4)

418 American Political Parties and Politics (4)

419 Legislative Process (4)

421 Comparative Politics (4)

423 Political Dynamics of Latin America (4)

425 United States Foreign Policy (4)

427 International Relations (4)

428 International Organization (4)

429 International Administration and Development (4)

430 Governments of Western Europe (4)

431 Governments of Latin America (4)

432 Government and Politics of Southeast Asia (4)

433 British Government and Commonwealth (4)

434 Government and Politics in Scandinavia (4)

435 Government of Soviet Union (4)

436 Governments of Sub-Saharan Africa (4)

437 Governments and Politics of South Asia (4)

438 Government and Politics of Japan (4)

439 Government and Politics of China (4)

440 Jurisprudence and the Judicial Process (4)

441 American Constitutional Law: Federalism (4)

442 American Constitutional Law: Civil Rights (4)

443 American Constitutional Law: Civil Rights in the Legal Process (4)

444 Anglo-American Legal System (4)

445 Judicial Behavior (4)

446 Comparative Legal Systems (4)

460 Foundations of Public Administration (4)

461 Municipal Administration (4)

463 Public Personnel Administration (4)

- 465 Principles of Employee Supervision (4)
- 466 Public Financial Administration (4)
- 468 Administration of Social Security Programs (4)
- 470 Public Relations in Government (4)
- 472 Organization and Management (4)
- 473 Systems Design in Government (4)
- 475 Comparative Administration (4)
- 476 Administrative Law (4)
- 477 Introduction to City Planning (4)
- 480 Advanced Quantitative Methods in Political Science and Public Administration (4)
- 490 Special Studies in Political Science (4)
- 491 Proseminar in American Government and Politics (2)
- 492 Proseminar in International Relations (2)
- 493 Proseminar in Comparative Government (2)
- 494 Proseminar in Legal Process (2)
- 495 Proseminar in Political Theory (2)
- 496 Proseminar in Public Administration (2)
- 499 Undergraduate Directed Study (1-4)

Graduate Courses

Classified graduate standing required for admission.

505 Seminar: Contemporary American National Government (4)

Prerequisites: Bachelor's degree and superior academic performance in Political Science or consent of instructor. Analysis of selected issues and problems of national significance in the United States. May be repeated as subject matter changes.

510 Seminar: Political Theory (4)

Prerequisite: Political Science 410, 411, or 413. Studies of selected topics in political philosophy. May be repeated as subject matter changes.

518 Seminar: Political Behavior (4)

Prerequisites: Political Science 497, and 414, 415, or 419. Analysis of selected aspects of organizations and functioning of political parties, interest groups, and political participation. May be repeated as subject matter changes.

527 Seminar: Advanced Studies in International Relations (4)

Prerequisite: Eight units from international relations courses; Latin-American Studies 424AB, Political Science 425-429. Special problems in international politics. May be repeated as subject matter changes.

530 Seminar: Comparative Government (4)

Prerequisites: Political Science 421 and at least 4 units from 430/439 or equivalents. Special problems, practices, customs, and movements in a selected number of nations, major and minor, with emphasis on use of primary source material in field. May be repeated as subject matter changes.

531 Seminar: Latin American Government (4)

Prerequisite: Political Science 431 or equivalent. Analysis of selected topics in Latin American politics.

540 Seminar: Public Law (4)

Prerequisite: One year of public law course work. Advanced study in selected areas of public law, constitutional law, comparative law, comparative legal systems; civil rights, judicial process, judicial behavior, legal history and theory. May be repeated as subject matter changes.

560 Seminar: Public Administration (4)

Prerequisite: Political Science 460AB or equivalent. Advanced studies in administrative organization; delegation, field coordination, communication, accountability and controls; analysis of values process, structures and arrangements in large scale governmental management; trends in administrative research.

561 Seminar: State and Local Government and Administration (4)

Prerequisites: Political Science 403 and 460AB or 461AB. Advanced studies in state and local governmental institutions and processes. Selected topics may include intergovernmental relations, constitutions and charters, financial administration and policy, concepts of civil service, and metropolitan problems.

563 Seminar: Advanced Problems in Public Personnel Administration (4)

Prerequisite: Political Science 463AB or equivalent. Case studies of personnel problems encountered in governmental agencies; examination of varying roles of boards, commissions, and official legislative bodies; new frontiers in personnel research and personnel legislation.

564 Seminar: Bureaucratic Systems (4)

Prerequisite: classified standing for master's degree programs in Department of Political Science. Analysis of bureaucratic systems at all levels of government, with emphasis on value context, environmental setting, operational dynamics and power variables. May be repeated as subject matter changes.

566 Seminar: Public Budgeting and Financial Administration (4)

Prerequisite: Political Science 466 or consent of instructor. Issues and problems in budget authorization, execution, and control, including public policy implications. Special emphasis on program and performance budgeting.

568 Seminar: Community Development Administration (4)

Prerequisite: Consent of instructor. Theory and process of planned development; role of administration in formulating and implementing development goals at all political community levels; planning, strategy, obstacles, assistance, development of competent personnel, institution-building.

590 Seminar: Philosophy of Public Service (4)

Prerequisites: Political Science 560 or 561 and consent of instructor. Past and present philosophies of public service; bureaucracy in modern society; social-psychological and ethical aspects of public service; case studies of decision making.

591 Seminar: Administrative Theory and Behavior (4)

Prerequisite: Political Science 560 or consent of instructor. Analysis of administrative theory and utilization of advances in behavioral research as they apply to studies of administrative process and organization.

595 Selected Issues in Public Administration (4)

Prerequisite: Twelve units in area of public administration, including one seminar. Presentation and discussion of selected issues and trends in administrative processes at all levels of government. Topic subject changes. May

be repeated to maximum of 8 units with approval of adviser.

598 Graduate Directed Study (1-5)

Prerequisite: Consent of an instructor to act as sponsor. Independent study of advanced topics in field; regular conferences with sponsor. May be repeated.

599 Thesis or Project (1-5)

Prerequisites: Advancement to candidacy, consent of an instructor to act as sponsor, and departmental approval of topic prior to registration. Independent research resulting in a thesis or project. Graded CR/NC only.

Psychology

In School of Letters and Science

The Department of Psychology offers both the Master of Arts and the Master of Science degree, in programs based on undergraduate preparation and designed to meet individual interests. Programs for the Master of Science degree may emphasize clinical areas.

Admission to the Program

Applicants must have completed an undergraduate major in psychology. Admission also requires application to the Department of Psychology. Application forms may be obtained from the departmental graduate studies office. Completed applications, together with transcripts from all colleges and universities attended except Cal State L.A., must be received by the department before action on admission can be assured.

Students who have not received a baccalaureate degree in psychology or whose grade point average in the last 90 quarter units falls below the University admission requirements may, under certain conditions, be admitted by special action. Evaluation of undergraduate preparation is made by the departmental graduate studies committee.

The Psychology Clinic

As part of the Associated Clinics the Department of Psychology provides a training facility for psychology majors and students in the general pupil personnel services credential program. Students selected are admitted to this program upon approval for enrollment in Psychology 595. In addition qualified students may enroll in Psychology 590 and counsel children, families and/or groups.

Advancement to Candidacy

Application for advancement to candidacy is made by classified graduate students when they have completed at least 16 units of the approved program with a g.p.a. of 3.0 or above, including the following required core courses: Psychology 560, 561, and either 411, 414, or 430. These courses must be completed within the first 24 units of the program.

Master of Arts Degree

A total of 45 units, including at least 23 units in 500-level courses, is required.

Required in Psychology (12 units):

560 Introduction to Graduate Study in Psychology I (4)

561 Introduction to Graduate Study in Psychology II (4)

Select one of following:

411 Research Methodology in Psychology (4)

414 Analysis of Variance (4)

430 Introduction to Psychological Measurement (4)

Electives in Psychology/Related Fields (33 units):

Select 2-9 units of Psychology 597, 598, and/or 599, determined in consultation with departmental adviser, and elect additional 24-31 units of courses approved by adviser to complete 45 units required for the degree.

Of the required 23 units of 500-level courses in Psychology, 16 units must be in courses other than 590, 595, 597, 598, and 599. No more than 13 units may be elected in combinations of 590, 595, 597, 598, and 599.

Comprehensive Exam, or Thesis/Project (0, 4 units):

Comprehensive Examination

or

599 Thesis/Project (4)

Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Master of Science Degree

A total of 54 units, including at least 27 units in 500-level courses, is required.

Required in Psychology (12 units):

560 Introduction to Graduate Study in Psychology I (4)

561 Introduction to Graduate Study in Psychology II (4)

Select one of following:

411 Research Methodology in Psychology (4)

414 Analysis of Variance (4)

430 Introduction to Psychological Measurement (4)

Required Field Study (8 units):

585 Directed Clinical Practice (8)

or

595 Field Experience in Psychology (8)

This field requirement may be waived for students with adequate prior experience in an appropriate field, as determined by the department. Any combination of field experience and teaching experience which meets the requirements for the pupil personnel services credential with specialization in school psychology also satisfies this requirement.

Electives in Psychology/Related Fields (33 units):

Select 2-9 units of Psychology 597, 598, and/or 599, determined in consultation with departmental adviser, and elect additional 24-31 units of courses approved by adviser to complete 54 units required for the degree.

Of the required 27 units of 500-level courses in psychology, 16 units must be in courses other than 590, 595, 597, 598, and 599. No more than 13 units may be elected in combinations of 590, 595, 597, 598, and 599.

Comprehensive Exam, or Thesis/Project (0, 4 units):

Comprehensive Examination

or

599 Thesis/Project (4)

Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

- 401 Physiological Psychology (4)
- 405 Group Methods for Psychological Intervention (4)
- 406 Mental Retardation (4)
- 408 Comparative Psychology (4)
- 410AB Abnormal Psychology (4-4)
- 411 Research Methodology in Psychology (4)
- 412AB Psychology of Human Development: Childhood and Adolescence (4-4)
- 413 Statistical Methods in Psychology (4)
- 414 Analysis of Variance (4)
- 416 History of Psychology (4)
- 418AB Personality: Theory and Research (4-4)
- 419 Psychology of Women (4)
- 420 Psychology of Communications (4)
- 422 Social Psychology (4)
- 423 Motivation and Emotion (4)
- 424A Psychology of Learning: Basic Processes (4)
- 424B Psychology of Learning: Complex Processes (4)
- 425 Sensation and Perception (4)
- 426 Family Therapy Dynamics and Perspectives (4)
- 428 Introduction to Analysis of Behavior (4)
- 430 Introduction to Psychological Measurement (4)
- 431 Psychology of Individual Differences (4)
- 432 Psychology of Language Behavior (4)
- 433 Psychology of Cognitive Development (4)
- 436AB Theory and Techniques in Counseling (4-4)
- 438 Introduction to Clinical Psychology (4)
- 440 Theory and Measurement of Attitudes and Opinions (4)
- 441 Psychology of Small Group Behavior (4)
- 442 Industrial and Organizational Psychology (4)
- 445 Community and Organizational Psychology (4)
- 446 Employment and Personnel Psychology (4)
- 447 Human Performance in Man-Machine Systems (3)
- 448 Psychology of Labor-Management Relations (4)
- 451 Psychological Principles of Systems Design (3)
- 454 Special Topics in Psychology (1-6)
- 462 Psychology of Human Development: Maturity and Aging (4)

Graduate Courses

Classified graduate standing required for admission.

500 Seminar: Basic Learning Processes (4)

Prerequisites: Psychology 424A and consent of instructor. Critical examination of experimental literature within selected problem areas of learning. Discussion of the major theories of learning as they apply to relatively simple forms of learning.

501 Seminar: Sensation and Perception (4)

Prerequisites: Psychology 425 and consent of instructor. Critical review of current literature; theories, methods and problems concerning sensation and perception.

502 Seminar: Motivation and Emotion (4)

Prerequisites: Psychology 423 and consent of instructor. Critical review of current literature and methods in the study of motivation and emotion.

503 Seminar: Complex Learning Processes (4)

Prerequisites: Psychology 424B, 500 and consent of instructor. Critical examination of methods, experimental data and theory in human learning, problem solving, concept attainment, cognition, and the role of language.

504 Advanced Experimental Methods (3)

Prerequisites: Consent of instructor; concurrent enrollment in 1 unit of Psychology 598 required. Emphasis on design of experiments and apparatus in psychological research. Instruction in use of basic laboratory equipment and designs in field of major interest.

506 Seminar: Physiological Psychology (4)

Prerequisites: Psychology 401 and 414AB. Critical evaluation of experimental work in field of physiology with object of incorporating results into preparation of advanced students in psychology. Detailed attention to handling data and conclusions drawn from methods.

508 Seminar: Comparative Psychology (4)

Prerequisites: Psychology 408 and 401 or consent of instructor. Examination in depth of contemporary research dealing with behavior of organisms at different phylectic levels. May be repeated once for credit as subject matter changes.

510 Seminar: Abnormal Psychology (4)

Prerequisite: Psychology 410AB. Intensive analysis of major types of abnormal behavior, their development and prevention. Emphasis on relationship of abnormal behavior to theories of personality and research findings.

511 Seminar: Experimental Child Psychology (4)

Prerequisites: Psychology 304AB and 412AB, or comparable undergraduate work in research methods and human development, and consent of instructor. Issues in developmental psychology. Topics announced in *Schedule of Classes*, selected from following: 511R Research Methods in Child Psychology, 511C Comparative Developmental Psychology, 511T Theories of Developmental Psychology. May be repeated to maximum of 12 units with different suffixes.

512 Behavior Disorders in Children (4)

Prerequisite: Psychology 410AB, 412AB or equivalent. Application of principles of psychology to behavior disorders in children. Designed primarily for clinicians, social workers, school psychologists, and parent educators.

522 Seminar: Social Psychology (4)

Prerequisite: Psychology 422 or consent of instructor. Theory, methodology, and applied problems dealing with the phenomena of social behavior. Individual projects are required.

531AB Individual Testing and Case Study Techniques (4-4)

Also listed as Guidance 531AB in Education

Prerequisites: Psychology 430 and one of following sequences: 410AB and 438; 410AB and 431; 418AB and 431. Intensive practice in administration and interpretation of better-known testing devices for mental ability, perceptual and motor functioning, and personality dynamics, with attention to integration of results in case studies. Lecture 3 hours, laboratory 3 hours.

533 Psychological Testing Applied to Mentally and Physically Atypical (4)

Also listed as Guidance 533 in Education

Prerequisite: Psychology 531AB or equivalent. Selection, administration, and interpretation of tests used for appraising the atypical individual. Lecture 3 hours, laboratory 3 hours.

534 Methods of Personality Assessment (4)

Also listed as Guidance 534 in Education

Prerequisite: Psychology 531AB. Study and evaluation of currently used personality tests, objective and projective. Administration, scoring, interpretation, and reporting of results; findings of empirical research. Lecture 3 hours, laboratory 3 hours.

536 Seminar: Counseling (4)

(General and Special Sections)

Prerequisites: Psychology 436AB, 410AB or 418AB and consent of instructor. Intensive discussion of typical counseling situations coordinated with readings in area; evaluation of selected counseling theories. Offered in general and special sections, e.g., child, family, group. May be repeated in different sections, with maximum of 8 units applied to Master's degree.

537 Introduction to Rorschach Technique (4)

Prerequisites: Minimum of 12 units of 500-level courses in Psychology, including 534, and consent of instructor. Appraisal of personality by means of the Rorschach technique; administration, scoring, and basic interpretation. Lecture 3 hours, laboratory 3 hours.

541 Seminar: Group Processes (4)

Psychological nature of social groups with emphasis on processes in small groups. Research design and experimental methods of studies in social interaction of small groups. Analysis of research findings.

546 Seminar: The Psychology of Work (3)

Prerequisite: Psychology 446 or consent of instructor. Analysis of results of recent behavioral research applied to employment. Psychological aspects of work in an industrial setting stressed.

547 Seminar: Psychological Factors in Man-Machine Systems (4)

Prerequisite: Psychology 451 or consent of instructor. Individual research projects in application of behavioral properties of man to man-machine systems. Studies of ways of structuring machines to enhance system performance; research methods in human factors engineering; current problem areas.

552 Seminar: Psychological Foundations of Organizational Behavior (3)

Prerequisite: Psychology 451 or consent of instructor. Investigation and analysis of psychological foundations of organizational behavior. Particular attention given to relationship of psychological principles to organizational structure and functions in industry.

560 Introduction to Graduate Study in Psychology I (4)

Prerequisites: Undergraduate major in psychology, including courses in history/systems, experimental/laboratory methods, and statistical methods. Analysis and integration of current theories and knowledge in areas of learning, motivation, perception, and physiological psychology.

561 Introduction to Graduate Study in Psychology II (4)

Prerequisites: Undergraduate major in psychology, including courses in history/systems, experimental/laboratory methods, and statistical methods. Analysis and integration of current theories and knowledge in areas of human development, social processes, personality, and deviant behavior as they relate to psychological phenomena.

582 Seminar: Research Methods in Psychology (3)

(Special Section)

Prerequisites: Undergraduate courses in statistics and subject matter of special section; consent of instructor; corequisite: one unit of Psychology 597. Advanced research methods in specialized areas of psychology. Special sections, e.g. clinical, personality, social, industrial, physiological. Repeatable in different sections. Student conducts project utilizing specific research methods.

585 Directed Clinical Practice (4)

Prerequisites: Psychology 438 and 436B or 531B; or 405 and 445; and departmental approval. Lecture, discussion and supervised experience in providing psychological services in campus or community settings. May be repeated to maximum of 12 units. Graded CR/NC only.

588 Critical Problems in Psychology (4)

Prerequisites: Completion of core requirements in psychology plus 16 units of graduate work including at least one of the following: Psychology 500, 501, 502, or 503, and consent of instructor. Critical problems in psychology as a science and as a profession. May be repeated for credit.

590 Practicum in Counseling (1-9)

Prerequisites: Psychology 438, 536 (may be taken concurrently), and approval by departmental committee in quarter prior to enrollment. Independent, supervised field experience in counseling. Graded CR/NC only.

595 Field Experience in Psychology (1-9)

Prerequisites: Consent of instructor and application to department in quarter prior to enrollment. Independent supervised field experience in an applied area of psychology. May be repeated to maximum of 12 units. Graded CR/NC only.

597 Graduate Research (1-6)

Prerequisites: Consent of an instructor to act as sponsor and departmental approval of project prior to registra-

tion. Independent research under guidance of the faculty. May be repeated for credit. Graded CR/NC only.

598 Graduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Independent study of advanced topics in the field; regular conferences with sponsor. May be repeated for credit. Graded CR/NC only.

599 Thesis or Project (1-9)

Prerequisites: Advancement to candidacy, consent of an instructor to act as sponsor, and departmental approval of topic prior to registration. Independent research resulting in a thesis or project. May be repeated to maximum of 9 units. Graded CR/NC only.

Recreation

In School of Fine and Applied Arts

The Master of Science degree in Recreation is built on a broad foundation of undergraduate preparation in recreation and such closely allied fields as education, physical education, political science, psychology, sociology, and the related fields of art, dance, drama, music, and speech. The program is designed for recreation professionals desiring advanced preparation for a variety of management and specialist positions in the rapidly expanding field of recreation and leisure services.

Graduate students may plan programs to reflect either of two professional emphases:

(1) Those interested in administrative or supervisory careers in public, private, voluntary, institutional, or commercial agencies providing recreation or leisure services should elect courses which support an emphasis in administration.

(2) Those interested in becoming planners, consultants, program directors, activities supervisors, specialists in recreation, and leisure counseling or recreation therapy, or college teachers of recreation, should elect related support courses.

The specific courses included in the master's degree program to develop the area of emphasis must be selected with the approval of the principal graduate adviser.

Admission to the Program

Applicants must have a bachelor's degree in recreation and evidence of successful full-time experience in recreation or related leadership, supervisory, or administrative positions. Experience which will be acceptable in lieu of the latter requirement must be determined by the departments. In addition, applicants must have a 2.75 g.p.a. in the last 90 quarter units and a score of 400 on either the Verbal or Quantitative Aptitude Test of the GRE.

Students not satisfying these requirements must complete a minimum of 12 units of upper division courses in Recreation with a satisfactory record, as specified by the principal graduate adviser. These courses, even though taken after admission to the University as a graduate student, are prerequisite to admission to classified graduate standing and may not be counted toward the master's degree.

Requirements for the Degree

A total of 45 units, including 24 in 500-level courses in Recreation and a minimum of 15 in 400- or 500-level courses from allied fields or related arts, is required. All programs must be planned with the principal graduate adviser and approved by the department chairperson and the school graduate dean.

Required in Recreation (9 units):

- 524 Seminar: Current Problems in Recreation and Leisure (3)
- 566 Seminar: Administration of Public Recreation (3)
- 582 Seminar: Research Design in Recreation and Leisure (3)

Electives in Recreation (12-15 units):

Select 500-level courses, with approval of principal graduate adviser.

Electives in Recreation and Related Fields (21 units):

Select from 400- and 500-level courses in Recreation and allied fields or related arts, with approval of principal graduate adviser. No more than 6 units may be in Recreation.

Comprehensive Exam or Thesis/Project (0, 3 units):

Comprehensive Examination

or

599 Thesis or Project (3)

Students selecting the comprehensive examination should expect to take it in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

- 412 Recreation and Leisure Services in the Urban Setting (3)
- 422 Institution Recreation and Leisure Services (3)
- 423 Public Recreation and Leisure Services (3)
- 424 Voluntary Recreation and Leisure Services (3)
- 445 Planning and Promotion of Special Events (3)
- 454 Special Topics in Recreation (1-4)
- 461 Community and Public Relations in Recreation (3)
- 471 Recreation for the Handicapped (3)
- 472 Recreation Therapy (3)
- 491 Special Studies in Recreation (1-4)
- 492 Research and Evaluation in Recreation and Leisure (3)
- 499 Undergraduate Directed Study (1-3)

Graduate Courses

Classified graduate standing required for admission.

522 Seminar: Recreation in Public Education (3)

Prerequisite: Recreation 566. Uses of educational resources for recreation and community living; after-school programs, summer programs, school camping, outdoor education, and adult education.

524 Seminar: Current Problems in Recreation and Leisure (3)

Prerequisites: Advancement to candidacy and completion of minimum of 12 units of 500-level courses in recreation. Current problems in recreation and leisure.

532 Construction and Maintenance of Parks, Playgrounds, and Recreation Facilities (3)

Prerequisite: Recreation 412, 422, 423, or 424; recommend 566 be taken concurrently. Standards for site selection, development, facilities, and equipment; operation and maintenance of buildings and grounds.

542 Recreation for Special Groups (3)

Prerequisite: Recreation 472; recommend 566 be taken concurrently. Background and techniques necessary for initiating recreation program of rehabilitation for mentally and physically ill or handicapped.

562 Seminar: Surveys and Recreation Planning (3)

Prerequisites: Recreation 566 and either 412, 422, 423, or 424. Planning for recreation services and facilities based on studies and surveys; scope, content, objectives, procedures, and types of recreation surveys.

564 Seminar: Legal and Financial Aspects of Recreation (3)

Prerequisite: Recreation 566. Interpretation of state statutes affecting recreation; special attention to contractual agreements, leases, and torts; analysis of fundamental principles and rules governing public recreation finance.

566 Seminar: Administration of Public Recreation (3)

Prerequisite: Recreation 412 or 423. Analysis of administrative duties and responsibilities; suggested ap-

proaches and methods of administration proved by actual experience.

578 Internship in Recreation or Leisure Service (1-3)

Prerequisites: Recreation 566, advancement to candidacy, completion of minimum of 12 units of 500-level courses in recreation, recommendation of principal graduate adviser and program coordinator, and consent of an approved recreation or leisure agency to provide required experience and supervision.

582 Seminar: Research Design in Recreation and Leisure (3)

Prerequisite: Recreation 492. Application of appropriate methods and techniques of research design to proposed individual investigations in recreation or leisure. Prior to completion student completes and submits tentative outline to graduate committee for approval as topic for either Recreation 597, 598, or 599.

597 Graduate Research (1-3)

Prerequisites: Recreation 582, advancement to candidacy, approval of graduate committee, and consent of an instructor to act as sponsor prior to registration. Independent research under guidance of faculty. May be repeated to maximum of 6 units; combined total of 6 units in Recreation 597, 598, and 599 applicable to degree. Graded CR/NC only.

598 Graduate Directed Study (1-3)

Prerequisite: Consent of an instructor to act as sponsor. Independent study of advanced topics in the field: regular conferences with sponsor. May be repeated for credit.

599 Thesis or Project (1-3)

Prerequisites: Recreation 582, advancement to candidacy, approval of graduate committee, and appointment of thesis committee by program coordinator prior to registration. Independent research resulting in a thesis or project. Must be repeated to maximum of 3 units. Graded CR/NC only.

Social Science

In School of Letters and Science

The Master of Arts degree program in Social Science is designed for students who wish an interdisciplinary approach to the study of various social issues or problems, and for social science teachers who wish to develop more extensive backgrounds in their teaching areas. Courses chosen for the program may include any social science fields or related areas which are acceptable for graduate credit and approved by the Social Science Coordinator.

Admission to the Program

In addition to the University requirements for admission to graduate study, applicants must have had at least 36 units of upper division courses in at least four social science fields.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required.

Area of Concentration (37 units):

Required in Social Science:

500 Seminar: Social Science (4-4)

598 Graduate Directed Study (3)

From Social Science Fields:

(1) Two approved 4-unit, 500-level courses from two of following fields: Anthropology, Economics, Geography, History, Political Science, Social Psychology, Sociology.

(2) One additional 500-level course in a social science field.

(3) Additional 14 units of 400- or 500-level courses in the social sciences.

Electives in Social Science/Related Fields (8 units):

Select with approval of adviser.

Comprehensive Examination:

Written examination in composite Social Science field, and in two Social Science fields designated at time pro-

gram is prepared. Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Courses of Instruction

400-level Courses

For list of acceptable courses applicable to the master's degree, contact Dr. Benjamin W. Smith, Coordinator, Social Science.

Graduate Courses

Classified graduate standing required for admission.

500 Seminar: Social Sciences (4)

Prerequisite: Bachelor's degree and superior academic performance in social sciences. Interdisciplinary approaches to selected problems, regions, or trends directed by staff of cooperating departments. May be repeated with different instructor and topic to maximum of 8 units.

598 Graduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Independent study of advanced topics in field; regular conferences with sponsor. May be repeated for credit.

Sociology

In School of Letters and Science

The Master of Arts degree in Sociology provides advanced study in sociological theory and methods of research, with a variety of subject matter emphases which are planned with a graduate adviser.

It should be noted that this is not a degree program in social work. Students desiring professional training in social work are advised to seek it at a recognized school of social work offering a two-year program leading to the Master of Social Work degree.

The degree is intended to prepare students who will be pursuing study for the Ph.D., those planning to teach in community college or high schools, and those who will be working in a professional capacity in governmental or private agencies or organizations. Two options are offered. Option A requires a master's thesis, and Option B requires a comprehensive examination.

Admission to the Program

Prerequisite to admission are 36 units in Sociology. These must include Sociology 201, 202, 210AB, 390, 412, 414, and other courses as necessary. Satisfactory equivalents will be determined by a graduate adviser in Sociology.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required.

Required in Sociology (12–20 units):

410 Advanced Statistics (4)

(If not taken as undergraduate)

490 Advanced Research Methods (4)

(If not taken as undergraduate)

512 Seminar: History of Sociological Theory (4)

514 Seminar: Contemporary Sociological Theory (4)

590 Seminar: Research Methods (4)

Electives in Sociology (19–33 units):

These must include 8 units of 500-level seminars for students electing Option A, or 11 units for students electing Option B.

Thesis/Comprehensive Exam (0, 6 units):

Students elect Option A or Option B.

Option A: Thesis (11–26 units):

599 Graduate Thesis (6)

Oral defense of thesis required.

Option B: Comprehensive Examination:

The comprehensive examination is a written examination in four fields of concentration, consisting of theory, methods, and two other fields selected by the candidate and approved by the adviser. Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate advisers. For course descriptions, see undergraduate program.

410 Advanced Statistics (4)

415 Political Sociology (4)

420 Small Groups (4)

422 Social Psychology (4)

424 Mass Communications and Public Opinion (4)

425 Medical Sociology (4)

426 Deviant Behavior (4)

430 Urban Sociology (4)

434 Population and World Resources (4)

440 Marriage and the Family (4)

441 Sociology of Sex Roles (4)

442 Social Change (4)

444 Social Organization and Comparative Institutions (4)

445 Sociology of Religion (4)

446 Industry and the Social Order (4)

447 Sociology of Occupations and Professions (4)

448 Social Stratification (4)

460 Race and Social Conflict (4)

461 Social Welfare in the Minority Community (4)

472 Community Organization (4)

474 Methods of Social Work (4)

476 Child Welfare (4)

478 Social Legislation (4)

480 Criminology (4)

482 Juvenile Delinquency (4)

484 Corrections (4)

486 Probation and Parole (4)

490 Advanced Research Methods (4)

497 Sociology Proseminar (4)

499 Undergraduate Directed Study (1-4)

Graduate Courses

Classified graduate standing required for admission.

512 Seminar: History of Sociological Theory (4)

Historical dimensions, European and American, of development of systematic sociological theory and method; continuity and critique of major contributions to theories of society and the social processes.

514 Seminar: Contemporary Sociological Theory (4)

Exploration and critique of problems, methods, and theories characteristic of contemporary sociological inquiry; their relationship and contribution to advancement of sociological theory and application to selected social problems.

521 Seminar: Sociology of Creative Behavior (4)

Relationships of creative behavior (artistic, scientific, humanistic, religious, philosophical and legal) to social roles, structures, movements, and historical conditions.

522 Seminar: Social Psychology (4)

Analysis and critique of current approaches and investigations of the social processes that bind individuals and groups.

534 Seminar: Population Problems and Urbanization (4)

Prerequisite: Sociology 430 or 434. Problems in population growth, urbanization, and industrialization; social and psychological factors in population dynamics; advanced methods of population analysis, population planning, national resources and public policy.

540 Seminar: Marriage and the Family (4)

Advanced study of socio-psychodynamics of marriage and the family; emphasis on recent research on family change, parent-child relationships, and family instability; successful family life.

544 Seminar: Social Organization and Institutions (4)

Advanced consideration of selected macro-social structures and their related processes and functions: total societies, institutional sub-systems, complex organizations, ethnic sub-societies, professions; emphasis varies.

560 Seminar: Racial and Ethnic Minorities (4)

Prerequisite: Sociology 460 recommended. Examination in depth of critical problems and trends affecting American minority groups; emphasis on analysis of

change in strategies, tactics, ideologies, theories, and consequences of minority group relations.

580 Seminar: Criminology (4)

Prerequisite: Sociology 480. Advanced study of criminal behavior, social deviance and social structure; comparative studies of contemporary criminality, criminal justice, and criminal codes; legal, medical and psychiatric interpretation of criminal behavior.

584 Seminar: Corrections (4)

Advanced study of sociological aspects of treatment of offender from arrest to release process; discussion of cross-cultural practices and current theories.

590 Seminar: Sociological Research (4)

Prerequisite: Sociology 490; concurrent enrollment in Sociology 597 recommended. Advanced study in behavioral research methodology; survey design; experimental design, analysis; problems of interpretation, scaling techniques, models, simulation, machine data analysis, supervised application of methods.

595 Critical Issues and Problems in Sociology (4)

Prerequisite: Consent of instructor. Critical areas of social inquiry and special problems of sociology as a social science and as a profession. May be repeated once for credit.

597 Graduate Research (1-3)

Prerequisite: Consent of faculty sponsor. Proposed study must be approved prior to registration. Directed empirical research on a problem in sociology from conception through design; data gathering, analysis and final written report. May be repeated for credit. Graded CR/NC only.

598 Graduate Directed Study (1-4)

Prerequisite: Consent of faculty sponsor. Proposed study must be approved prior to registration. Directed reading and critical analysis on a problem in sociology, written reports and conferences. May be repeated for credit.

599 Graduate Thesis (1-3)

Prerequisites: Advancement to candidacy, consent of an instructor to act as sponsor, and departmental approval of topic prior to registration. Independent research resulting in a thesis or project. Must be repeated to maximum of 6 units. Graded CR/NC only.

Speech Communication and Drama

In School of Letters and Science

Master of Arts degrees are offered in Drama, Speech Communication, and Speech Pathology and Audiology.

Admission to the Programs

In addition to the University requirements for admission to graduate study, applicants must have a 2.75 g.p.a. in the last 90 quarter units.

Students must have appropriate undergraduate preparation, as described below for each degree program. Students are assigned a departmental adviser to assist them in designing a program suited to their individual interests and goals.

Master of Arts Degree in Speech Communication

Courses which are prerequisite to graduate courses listed below, including at least 30 units of undergraduate work in Speech Communication and Drama, must be completed for admission to the program. A formal conference with an assigned adviser is required for formulation of the degree program.

Requirements for the Degree

A total of 45 units, including at least 23 units in 500-level courses, is required.

Required in Speech Communication (23 units):

Select a minimum of 23 units in 500-level courses, with approval of adviser.

Electives (18–22 units):

Select 400- or 500-level courses in Speech Communication, with approval of adviser; a maximum of 8 of these units may be in related fields, with approval of adviser and department chairperson.

Comprehensive Exam or Thesis (0, 4 units):

Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements. In special cases, a thesis may be substituted for the comprehensive examination, with prior approval of adviser and department chairperson. Students authorized to submit a thesis must enroll in Speech Communication 599 for a minimum of 4 units.

Courses of Instruction

400-level Courses

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate adviser. For course descriptions, see undergraduate program.

IN SPEECH COMMUNICATION

- 454 Selected Studies in Speech Communication (2-4)
- 456 Development of Verbal Behavior in Early Childhood (4)
- 461 Descriptive Phonetics (4)
- 462AB Speech Science (2-2)
- 463 Psychology of Speech (4)
- 467 Studies in Esthetic Bases of Speech (4)
- 472 Studies in Literature of International Public Discourse (4)
- 473A Studies in Literature of American Public Discourse to 1860 (4)
- 473B Studies in Literature of American public Discourse 1860 to Present (4)
- 478 Group Communications: Dynamics of Leadership and Participation (4)
- 480 Rhetorical Theory: Greek and Roman (4)
- 481 Rhetorical Theory: Renaissance and Modern (4)
- 482 Rhetorical Theory: Contemporary Developments (4)
- 485 Rhetorical Criticism (4)
- 487 Proseminar: Experimental Research in Speech (4)
- 488 Psycholinguistic Aspects of Speech Communication (4)
- 489 Intercultural Communication (4)
- 490 Studies in Children's Speech Arts (4)
- 491 Instructional Theories in Speech Communication (4)
- 494 Speech Communication Behavior in Early Childhood (4)

Graduate Courses

Classified graduate standing required for admission.

567 Seminar: Theories of Oral Interpretation (4)

Prerequisite: Speech Communication 367 or consent of instructor. Analysis of main theories of art of interpretation, with special emphasis on their bearing on contemporary theory and practice. May be repeated once for credit with approval of adviser.

572 Seminar: British Public Address (4)

Prerequisites: Speech Communications 472 and 485 or consent of instructor. Intensive study of major British speakers, their ideas, rhetorical techniques, and roles in English history. May be repeated once for credit with approval of adviser.

576 Seminar: Argumentation, Discussion and Debate (4)

Prerequisite: One upper division course in rhetorical theory, or consent of instructor. Analysis of significant literature, major trends, and theories of argumentation, discussion, and debate; intensive study of relationship of those areas to each other. May be repeated once for credit with approval of adviser.

580 Seminar: Rhetorical Theory (4)

Prerequisite: At least one upper division course in rhetoric. Selected studies in philosophy of speech rhetoric and influence of rhetoric on historic and contemporary movements. May be repeated once for credit with approval of adviser.

589 Seminar: Communication Theory and Language (4)

Prerequisite: Consent of instructor. Intensive study of contemporary theories, research methods, and subject areas in communication theory and language. Specific topics announced in *Schedule of Classes*. May be repeated once for credit with approval of adviser.

590 Seminar: Speech Education in America (4)

Prerequisite: Completion of one upper division course in speech education in America. Evolution of speech curriculum, recent developments in pedagogical theory and contemporary movements. May be repeated once for credit with approval of adviser.

598 Graduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Independent study of advanced topics in the field; regular conferences with sponsor. May be repeated for credit.

599 Thesis or Project (1-4)

Prerequisites: Advancement to candidacy, consent of an instructor to act as sponsor, and departmental approval of topic prior to registration. Independent research resulting in a thesis or project. May be repeated to maximum of 6 units. Graded CR/NC only.

Master of Arts Degree in Drama

Thirty units of approved undergraduate work in drama, speech, dramatic literature, cinema, or broadcasting, including Drama 311, 312, 313 or their equivalents, and six units of upper division work in technical theatre, are prerequisite to this program.

Requirements for the Degree

All students are required to serve in at least one of the following capacities during their graduate studies: (1) as an actor in two or more substantial acting roles; (2) as director of a one-act play or a full-length play; (3) as scenic, lighting, or costume designer of a production; or (4) as assistant to the faculty director for one production. The requirement must be met within the framework of regularly sponsored productions of the department.

A total of 45 units, including at least 23 units of 500-level courses, is required.

Required Core in Drama (20 units):

511 Seminar: Special Studies in Theatre History (4)

Repeat enrollment for total of 8 units

541 Seminar: Theories of Acting (4)

566 Seminar: Dramatic Theory (4)

570 Seminar: Experimental Theatre (4)

Electives in Drama (17 units):

Select 3 units in one of following:

595 Graduate Performance (1-4)

598 Graduate Directed Study (1-4)

599 Thesis/Project (4)

Select 8 units from following:

439 Theatre Management (4)

445 Principles of Directing I (4)

446 Principles of Directing II (4)

460 Studies in Selected Dramatists (4)

461 Nature of Dramatic Comedy (4)

462 Nature of Dramatic Tragedy (4)

463 Shakespeare as Living Theatre (4)

470 Selected Studies in Theatre Arts (4)

471 The Theatre of the Avant-Garde (4)

472 History and Analysis of Lyric Theatre (4)

476 Playwriting (4)

Select 6 units from following:

426 Stage Costume Design I (3)

427 Stage Costume Design II (3)

431 Stage Scenery Design I (3)

432 Stage Scenery Design II (3)

434 Stage Lighting Design I (3)

435 Stage Lighting Design II (3)

Additional Electives (8 units):

Select with approval of adviser.

Comprehensive Examination:

Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Courses of Instruction**400-level Courses**

The following courses may be applied toward requirements for the master's degree, subject to limits established by the department and approval of graduate adviser. For course descriptions, see undergraduate program.

IN DRAMA

426 Stage Costume Design I (3)

427 Stage Costume Design II (3)

431 Stage Scenery Design I (3)

432 Stage Scenery Design II (3)

434 Stage Lighting Design I (3)

435 Stage Lighting Design II (3)

439 Theatre Management (4)

445 Principles of Directing I (4)

446 Principles of Directing II (4)

460 Studies in Selected Dramatists (4)

461 Nature of Dramatic Comedy (4)

462 Nature of Dramatic Tragedy (4)

463 Shakespeare as Living Theatre (4)

470 Selected Studies in Theatre Arts (4)

471 Theatre of the Avant-Garde (4)

472 History and Analysis of Lyric Theatre (4)

476 Playwriting (4)

480 Cinema as Dramatic Art (4)

Graduate Courses

Classified graduate standing required for admission.

511 Seminar: Special Studies in Theatre History (4)

Prerequisites: Drama 311, 312, and 313 or equivalents. Significant era or movement in theatre history. Specific subject announced in *Schedule of Classes*. May be repeated once for credit.

541 Seminar: Theories of Acting (4)

Prerequisite: At least one upper division course in acting or directing. Major theories of acting from Diderot to present with special emphasis on origins, esthetics, and psychology of acting.

566 Seminar: Dramatic Theory (4)

Prerequisite: At least one upper division course in dramatic theory or dramatic literature. Backgrounds in theatrical art, analysis of the esthetic principles and content of the theatre; selected problems in philosophy of dramatic art.

570 Seminar: Experimental Theatre (4)

Prerequisites: Drama 471 and an upper division course in dramatic literature and/or dramatic theory. Significant theatrical and dramatic theories and developments that have contributed specifically to experimental search for twentieth century forms in theatre arts.

595 Graduate Performance (1-4)

Prerequisite: Consent of graduate adviser. Demonstration of graduate-level proficiency in a major performance situation; research or analytical written project directly related to performance. May be repeated to maximum of 4 units.

598 Graduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Independent study of advanced topics in the field; regular conferences with sponsor. May be repeated for credit.

599 Thesis or Project (1-6)

Prerequisites: Advancement to candidacy, consent of an instructor to act as sponsor, and departmental approval of topic prior to registration. Independent research resulting in a thesis or project. May be repeated to maximum of 6 units. Graded CR/NC only.

Master of Arts in Speech Pathology and Audiology

This degree is offered jointly with the Department of Special Education. The program may be taken with a concentration in Speech Pathology or in Audiology, or with content in both areas rather than a concentration in either.

The concentration in Speech Pathology is offered in the Department of Speech Communication and Drama; the concentration in Audiology is offered in the Department of Special Education. Students interested in a program without concentration should seek advisement through either of the cooperating departments.

Admission to the Program

A bachelor's degree from an accredited college or university with a major in Speech Pathology or a Special Education credential in Speech and Hearing, or the equivalent in course work, is required. A formal conference with an assigned adviser is required for formulation of the degree program.

Requirements for the Degree

A minimum of 45 units, including at least 29 units in 500-level courses, is required.

Concentration in Speech Pathology

Required in Speech Pathology (29 units):

- 534 Seminar: Speech Pathology: Voice Disorders (4)
- 535AB Graduate Studies in Stuttering (3-3)
- 536 Seminar: Neuropathologies of Speech (4)
- 537 Seminar: Language Disorders of Children (4)
- 538 Seminar: Speech Pathology: Articulation Disorders (4)
- 546 Advanced Diagnostic Procedures in Speech Disorders (3)
- 548 Advanced Clinic Practice in Speech Disorders (2-2)

Elective (4 units):

In consultation with adviser, select one course from among the following in Speech Pathology. Students who expect to continue study for a Ph.D. degree should elect Speech Pathology 599.

- 439 Selected Studies in Speech Pathology (4)
- 539 Seminar: Speech Pathology: Selected Studies (4)
- 598 Graduate Directed Study (4)
- 599 Thesis or Project (4)

Additional Electives (12 units):

Select courses appropriate for ASHA certification and licensure with approval of adviser; these may include Audiology. Speech Pathology majors must have completed at least 9 units of course work in Audiology at either the undergraduate or graduate level for certification and licensure.

Comprehensive Examination:

Students should expect to take the comprehensive examination in the quarter in which they complete all course work on their programs, and must comply with school and departmental requirements.

Concentration in Audiology

A total of 45 units, including at least 23 units in 500-level courses, is required. For a description of the requirements for this program, see the Audiology section of the Department of Special Education in the School of Education.

Courses of Instruction

Graduate Courses

Classified graduate standing required for admission.

534 Seminar: Voice Disorders (4)

Prerequisite: Speech Pathology 437. Theory, research and methodology in diagnosis and treatment of various kinds of voice disorders, both functional and organic.

535AB Graduate Studies in Stuttering (3-3)

Prerequisite: Speech Pathology 435. Theory, research and methodology in diagnosis and treating of stuttering. Clinical practicum required. Students must enroll in AB sequence in successive quarters. Lecture 2 hours, laboratory 3 hours.

536 Seminar: Neuropathologies of Speech (4)

Prerequisites: Speech Pathology 436 and 462AB. Theory, research, and methodology in diagnosis and treatment of various kinds of speech and language disorders associated with neuropathologies.

537 Seminar: Language Disorders of Children (4)

Prerequisites: Speech Pathology 435, 436 and 456. Theory, research, and methodology in diagnosis and treatment of various kinds of language disorders in children, including aphasia.

538 Seminar: Articulation Disorders (4)

Prerequisite: Speech Pathology 437. Theory, research, and methodology in diagnosis and treatment of various kinds of articulation disorders.

539 Seminar: Selected Studies in Speech Pathology (4)

Intensive study of specialized area of speech pathology at master's or post-master's level. Subject will vary. May be repeated for credit.

546 Advanced Diagnostic Procedures in Speech Disorders (3)

Prerequisite: Speech Pathology 446. Intensive study of tests, methods, and procedures used in assessing individuals with speech/language disorders, with special emphasis on integration of results in case studies. Lecture 2 hours, laboratory 3 hours.

548 Advanced Clinical Practice in Speech Disorders (2)

Prerequisite: Speech Pathology 448 or equivalent. Advanced clinical procedures in diagnosis and therapy with speech and language-handicapped children and adults. Independent supervised clinical experience. May be repeated to maximum of 8 units.

556 Seminar: Natural Acquisition of Language (4)

Prerequisite: Speech Pathology 456 or consent of instructor. Research methods and issues in language development in early childhood; methods for studying language development in terms of semantic, syntactic, and phonological systems, principally among English-speaking children.

598 Graduate Directed Study (1-4)

Prerequisite: Consent of an instructor to act as sponsor. Independent study of advanced topics in the field; regular conferences with sponsor. May be repeated for credit.

599 Thesis or Project (1-6)

Prerequisites: Advancement to candidacy, consent of an instructor to act as sponsor, and departmental approval of topic prior to registration. Independent research resulting in a thesis or project. Oral defense of thesis required. May be repeated to maximum of 6 units. Graded CR/NC only.

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Listings corrected to publication deadline of December 31, 1975.

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 HOWARD S. McDONALD (1949–1962), *President*
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B.S., 1965, M.S., 1967, Colorado State University; D.B.A., 1971, Texas Technical University
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 B.A., 1940, Hastings College; M.S., in Ed., 1948, Ph.D., 1951, University of Southern California
- FRED M. REINMAN (1967), *Professor of Anthropology*
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 A.B., 1937, M.A., 1948, University of California, Berkeley; Ed.D., 1951, Stanford University; Licensed Psychologist, 1959, California
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- RICHARD D. ROBERTO (1966), *Assistant Professor of Engineering*
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 B.A., 1964, California State College, Los Angeles; M.A., 1970, New Mexico Highlands University
- MARTIN S. RODEN (1968), *Associate Dean, School of Engineering and Associate Professor of Engineering*
 B.S.E.E., 1963, M.S.E.E., 1964, Polytechnic Institute of Brooklyn
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- ROGER L. RODZEN (1974), *Director, University Union*
 B.A., 1956, Arizona State University
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- PAUL ROGERS (1970), *Associate Professor of Engineering*
 M.S., 1937, Ecole du Genie Civil, France; Registered Professional Civil Engineer, 1950, California; Registered Structural Engineer, 1941, Illinois, 1967, California; Registered Professional Engineer, 1945, Illinois, twelve other states, 1954-1970
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- CLARENCE K. SANDELIN (1949), *Professor of English*
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- PAULINE E. SCHATZ (1969), *Associate Professor of Home Economics*
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B.S., 1968, M.S., 1970, Idaho State University; Ph.D., 1973, University of Iowa
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- GUNJIT S. SIKAND (1958), *Associate Professor of Engineering*
B.S., 1947, University of Punjab, India; B.C.E., 1950, Alabama Polytechnic Institute; M.S., 1953, University of Colorado; Registered Professional Civil Engineer, 1954, California
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B.S., 1952, West Virginia University; M.A., 1962, Ph.D., 1967, University of Pittsburgh
- BARBARA PETERSON SINCLAIR (1961), *Professor of Nursing*
B.S., 1957, University of Maryland; M.N., 1958, Emory University; R.N., 1957, Maryland, 1958, District of Columbia, 1961, California
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B.A., 1935, Ed.D., 1948, Stanford University
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 B.S., 1955, M.A., 1965, California State College, Los Angeles
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 B.A., 1961, University of California, Riverside; Ph.D., 1964, Claremont Graduate School
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 Associate, 1939, Ontario College of Art; B.S., 1949, M.A., 1950, University of Illinois; Ph.D., 1959, University of Michigan
- JON SNODGRASS (1972), *Assistant Professor of Sociology*
 B.A., 1965, M.A., 1967, University of Maryland; Ph.D., 1972, University of Pennsylvania
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 B.A., 1966, University of New Mexico; M.A., 1967, New Mexico State University; Ph.D., 1971, Pennsylvania State University
- KEITH D. SNYDER (1953), *Professor of Music*
 B.M.Ed., 1931, Nebraska Wesleyan University; M.Mus., 1937, Syracuse University; Ed.D., 1953, Teachers College, Columbia University
- SIDNEY SOCLOF (1960), *Associate Professor of Engineering*
 B.S.E.E., 1958, University of Florida; M.S.E.E., 1959, University of Michigan; Ph.D., 1968, University of California, Los Angeles
- JOSEPH E. SOLDATE (1966), *Assistant Professor of Art*
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 B.A., 1952, M.A., 1957, California State University, Los Angeles; M.A., 1963, Immaculate Heart College
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 A.B., 1968, University of California, Berkeley; Ph.D., 1974, University of California, Los Angeles
- BERNARD J. SOMERS (1960), *Professor of Psychology*
 A.B., 1948, Dartmouth College; M.A., 1952, Ph.D., 1958, Columbia University; Licensed Psychologist, 1959, New York, 1960, California
- GERALD F. SORRENSEN (1958), *Associate Professor of Economics*
 Ph.B., 1939, University of Wisconsin; M.A., 1957, University of California, Los Angeles
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 B.A., 1966, Brandeis University; M.A., 1969, University of California, Los Angeles
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 B.A., 1951, M.A., 1954, Seminario Mayor de San José, Mexico; M.A., 1970, University of California, Los Angeles; Ph.D., 1973, University of Southern California
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 B.S., 1959, State University of New York, Albany; M.A., 1961, New York University; Ed.D., 1967, Northern Illinois University
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 B.S., 1953, Stanford University; M.S., 1958, Ph.D., 1962, University of Southern California
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 B.A., 1955, Fresno State College; M.A., 1959, Claremont Graduate School; M.P.H., 1964, University of California, Los Angeles; M.P.A., 1968, University of Southern California; Licensed Marriage, Family and Child Counselor, 1966, California
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 B.S., 1958, M.S., 1959, University of California, Los Angeles; R.N., 1954, California

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- JAMES J. STANSELL (1951), *Professor of Speech Communication*
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- KENT L. STECKMESSER (1960), *Professor of History*
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B.S., 1968, University of Connecticut; M.S., 1970, University of California; Los Angeles; R.N., 1963, Connecticut, 1965, California
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B.M., 1950, Oberlin College; M.A., 1951, Ed.D., 1955, Columbia University
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B.A., 1962, University of Minnesota; M.A., 1964, University of North Dakota; Ed.D., 1966, Indiana University; Licensed Psychologist, 1968, California; School Psychologist, 1970, California
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- JUDITH E. STEVENS-LONG (1971), *Associate Professor of Psychology*
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- RICHARD L. STONE (1971), *Associate Professor of Anthropology*
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B.E.E., 1944, City College of New York; M.S., 1949, Stevens Institute of Technology; Registered Professional Electrical Engineer, 1949, New York; 1955, California
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B.S., 1967, Fordham University; M.A., 1968, George Washington University; Ph.D., 1975, Claremont Graduate School
- ELWOOD B. TRIGG (1968), *Director of Counseling and Testing Counseling Center*
B.A., 1961, University of California, Los Angeles; M.A., 1962, University of Southern California; D.Phil., 1968, University of Oxford
- NATHANIEL TRIVES (1969), *Associate Professor of Criminal Justice*
B.S., 1968, California State College, Los Angeles; M.P.A., 1974, University of California, Los Angeles
- SIDNEY TRIVUS (1968), *Assistant Professor of Philosophy*
B.S., 1949, Indiana University; M.A., 1953, Ph.D., 1974, University of California, Los Angeles
- HELEN B. TRUHER (1961), *Professor of Education*
B.Ed., 1932, University of California, Los Angeles; M.A., 1955, Los Angeles State College; Ed.D., 1961, University of Southern California
- BEN L. TRYKOWSKI (1973), *Assistant Professor of Finance*
B.A., 1973, Rutgers University
- RONALD T. TSUKASHIMA (1972), *Assistant Professor of Sociology*
B.A., 1965, California State College, Los Angeles; M.A., 1967, Ph.D., 1973, University of California, Los Angeles
- ALVIN E. TUOHINO (1956), *Professor of Accounting*
B.A., 1935, Augustana College; M.S., 1940, University of Denver; C.P.A., 1951, Kansas, 1953, California
- ELEANOR M. TWEEDIE (1968), *Assistant to the Vice President for Academic Affairs and Associate Professor of English*
A.B., 1952, M.A., 1953, State University of New York, Albany; Ph.D., 1971, Cornell University
- MARIS U. UBANS (1959), *Associate Professor of Drama*
B.S., 1954, Syracuse University; M.A., 1955, Northwestern University
- JOSEPH G. URIBE (1960), *Professor of Art*
A.B., 1954, University of California, Los Angeles; M.A., 1959, Los Angeles State College
- DONALD W. URQUIDI (1962), *Professor of Political Science*
A.B., 1950, M.A., 1953, Ph.D., 1961, Columbia University
- S. WINIFRED UTZ (1969), *Associate Professor of Nursing*
B.S., 1943, M.Ed., 1958, University of Portland; M.S., 1969, University of California, Los Angeles; R.N., 1943, Oregon, 1967, California
- PHILIP D. VAIRO (1973), *Dean, School of Education and Professor of Education*
A.B., 1955, Hunter College; M.A., 1958, New York University; Ed.D., 1963, Duke University
- VELMA J. VANCE (1959), *Professor of Zoology*
B.S., 1951, College of Idaho; M.S., 1953, University of Arizona; Ph.D., 1959, University of California, Los Angeles
- MARYO VAN DEMAN (1960), *Professor of Music*
B.A., 1934, B.Mus., 1935, Whittier College; M.Mus., 1947, University of Southern California

- BETHUMNE VANDERBURG (1959), *Associate Professor of Mathematics*
B.S., 1935, University of Alberta; M.A., 1939, University of Toronto; Ph.D., 1949, University of Chicago
- SALVADOR R. VELASQUEZ (1973), *Director of Financial Aids*
B.S., 1964, M.A., 1973, California State University, Los Angeles
- STEWART M. VENIT (1971), *Assistant Professor of Mathematics*
B.A., 1966, Queens College; M.A., 1969, Ph.D., 1971, University of California, Berkeley
- ROBERT C. VERKLER (1970), *Assistant Professor of Business Information Systems*
B.S., 1937, M.S., 1951, University of Illinois; Registered Professional Industrial Engineer, 1960, California
- DIANE VERNON (1969), *Associate Professor of Nursing*
B.S., 1963, California State College, Los Angeles; M.N., 1969, University of California, Los Angeles; R.N., 1959, P.H.N., 1963, California
- GEORGE R. VICK (1967), *Associate Professor of Philosophy*
B.A., 1953, Yale University; Ph.D., 1968, University of Southern California; Certificat D'Etudes En Philosophie, 1956, Ecole de Theologie, France
- RICHARD J. VOGL (1961), *Professor of Biology*
B.S., 1953, M.S., 1955, Marquette University; Ph.D., 1961, University of Wisconsin
- LOUIS A. VOLSE (1964), *Assistant Professor of Engineering*
B.S., in G.E., 1942, United States Coast Guard Academy; B.S., in C.E., 1954, University of Washington; M.S., in C.E., 1956, University of Southern California; Registered Professional Civil Engineer, 1957, California
- WILLIAM COOPER WADDELL (1967), *Professor of Management*
B.S., 1950, United States Military Academy; M.S., 1955, D.B.A., 1969, University of Southern California
- KENNETH A. WAGNER (1969), *Associate Professor of Political Science*
B.S., 1959, M.Ed., 1964, South Dakota State University; Ph.D., 1970, University of Iowa
- PATRICIA L. WAGNER (1962), *Associate Professor of Physical Education*
B.A., 1957, M.A., 1962, Los Angeles State College
- MARIAN E. WAGSTAFF (1952), *Professor of Education*
B.A., 1933, San Francisco State College; M.A., 1944, Ed.D., 1958, Stanford University
- ROY H. WALDEN (1967), *Associate Professor of Art*
A.B., 1950, Howard University; M.A., 1954, University of California, Los Angeles
- H. JEAN WALDROP (1962), *Professor of Marketing*
B.A., 1951, Montana State University; M.B.A., 1953, Ph.D., 1960, University of Southern California
- HARRY V. WALL (1963), *Professor of Education*
B.A., 1952, Grace Bible Institute; B.S., 1956, Mankato State College; M.A., 1960, Ph.D., 1965, University of Minnesota
- KARL M. WALLACE (1948), *Associate Professor of Sociology*
B.S., 1942, M.S., 1945, Brigham Young University; Ph.D., 1947, University of Southern California; Licensed Psychologist, 1959, California; Licensed Marriage, Family and Child Counselor, 1964, California
- MARY D. WALTERS (1974), *Chief Acquisitions Librarian*
B.S., 1949, Savannah State College; M.S.L.S., 1951, Atlanta University
- EDWIN WANDT (1954), *Professor of Education*
A.B., 1946, M.Ed., 1948, Ed.D., 1951, University of California, Los Angeles; Certified Psychologist, 1959, California

- WEN L. WANG (1967), *Associate Professor of Engineering*
 B.S.C.E., 1956, Taiwan University; M.S.C.E., 1963, University of Utah; Ph.D., 1968, University of New Mexico
- MICHAEL LOUIS WAPNER (1968), *Assistant Professor of Psychology*
 B.A., 1957, Reed College; M.A., 1961, Los Angeles State College; Ph.D., 1966, University of California, Los Angeles
- MARYLYNNE WARD (1972), *Assistant Professor of Business Education*
 B.A., 1959, M.A., 1971, Ph.D., 1974, University of North Dakota
- TULLY E. WARREN (1950), *Associate Professor of Political Science*
 B.A., 1938, M.A., 1939, Ph.D., 1950, Stanford University
- JUDITH M. WASHBURN (1974), *Assistant Professor of Education*
 B.S., 1969, University of Wisconsin; M.A., 1971, Ph.D., 1974, Ohio State University
- PAUL V. WASHBURN (1973), *Assistant Professor of Management*
 B.A., 1969, Wake Forest University; M.A., 1972, Ph.D., 1973, Ohio State University
- ALICE V. WATKINS (1969), *Associate Professor of Education*
 B.A., 1955, Pepperdine College; M.S., 1970, California State College, Fullerton; Ph.D., 1975, Claremont Graduate School
- GARY STEELE WATSON (1974), *Assistant Professor of Business Law*
 A.B., 1964, J.D., 1967, University of California, Berkeley; M.A., 1974, University of Nevada, Reno; admitted to the Bar, 1968, Nevada
- DAVID J. WEISS (1970), *Assistant Professor of Psychology*
 B.A., 1966, University of Pennsylvania; Ph.D., 1973, University of California, San Diego
- DAVID L. WELCH (1962), *Professor of Industrial Studies*
 A.B., 1952, University of California, Los Angeles; M.A., 1960, University of Southern California
- WANDA WESTCOAST (1961), *Associate Professor of Art*
 B.A., 1956, M.F.A., 1961, University of Washington
- JOHN H. WESTON (1971), *Assistant Professor of English*
 B.A., 1954, Arizona State University; M.Ed., 1961, University of Arizona
- LEE J. WEXLER (1959), *Professor of Art*
 B.A., 1951, University of California, Los Angeles; M.F.A., 1959, University of Southern California
- DON LEE WHITE (1967), *Assistant Professor of Music*
 B.A., 1952, Los Angeles State College; M.M., 1959, University of Southern California
- PATRICIA M. WHITE (1962), *Assistant Professor of Physical Education*
 A.B., 1943, Occidental College; M.A., 1962, Los Angeles State College
- WILLIAM E. R. WHITELEY (1958), *Professor of Health and Safety Studies*
 B.S., in Ed., 1950, Ohio Northern University; M.S., in Ed., 1951, Florida State University; H.S.D., 1957, Indiana University
- RICHARD J. WHITING (1956), *Professor of Management*
 B.S., in E.E., 1946, B.S., in I.E., 1947, University of Washington; M.B.A., 1949, Stanford University; Ph.D., 1962, University of Southern California
- DOLORES B. WIGNEY (1973), *Assistant Professor of Accounting*
 B.A., 1972, M.A., 1973, University of California, Los Angeles
- PATRICIA WILD (1972), *Assistant Professor of Sociology*
 B.A., 1968, California State College, Los Angeles; M.A., 1969, Ph.D., 1974, University of California, Los Angeles
- WILLIAM E. WILGUS (1963), *Professor of Physical Education*
 B.S. in Ed., 1955, Ashland College; M.A., 1960, Ph.D., 1962, Ohio State University

- FRANK W. WILLIAMS (1956), *Professor of Art*
B.A., 1948, Colorado State College of Education; M.A., 1956, Denver University
- JAMES D. WILLIAMS (1974), *Coach in Physical Education*
B.A., 1957, M.A., 1964, California State College, Los Angeles
- WIRT A. WILLIAMS, JR. (1953), *Professor of English*
B.S., 1940, Delta State College; M.A., 1941, Louisiana State University; Ph.D., 1953, State University of Iowa
- WALTER G. WILLIAMSON (1972), *Coach in Physical Education*
B.A., 1958, Occidental College; M.A., 1960, California State Polytechnic College, San Luis Obispo
- GEORGE W. WILLOTT (1950), *Professor of Recreation*
B.S., 1938, M.S., 1939, University of Idaho
- JAMES BRIGHT WILSON (1948), *Professor of Philosophy*
B.A., 1936, Maryville College; B.D., 1939, Garrett Biblical Institute; M.A., 1942, Ph.D., 1944, University of Southern California
- HUBERT C. WINKLER (1968), *Professor of Physics*
Ph.D., 1954, University of Zurich
- ALBERT R. WISE (1950), *Associate Dean, School of Fine and Applied Arts and Professor of Physical Education*
B.S., 1947, M.A., 1948, Ohio State University; Ed.D., 1952, University of Southern California
- JEANNETTE R. WITUCKI (1967), *Associate Professor of Anthropology*
B.A., 1960, Ph.D., 1966, University of California, Los Angeles
- JOSHUA S. L. WONG (1968), *Associate Professor of Engineering*
B.Sc., 1961, Hong Kong University; Ph.D., 1965, Leeds University, England
- JOHN BRENT WOOD (1962), *Head, Continuations Section, Library*
B.A., 1955, University of Texas; M.A., 1956, University of Denver
- MARY F. WOODWARD (1963), *Associate Professor of Anthropology*
A.B., 1950, M.A., 1953, Ph.D., 1958, University of California, Los Angeles
- PAMELA D. WOODY (1974), *Assistant Professor of Speech Communication*
B.A., 1967, University of California, Los Angeles; M.A., 1970, University of Washington; Ph.D., 1974, Florida State University
- JOHN C. WOOLUM (1970), *Associate Professor of Physics*
B.A., 1960, University of Colorado; Ph.D., 1965, Cornell University
- PATRICIA WRIGHT (1970), *Assistant Professor of Home Economics*
B.A., 1944, Washington State University; M.A., 1964, University of California, Los Angeles
- EMIL WROBLICKY (1956), *Associate Professor of Physical Education*
B.S., 1950, Drake University; M.A., 1951, University of Notre Dame
- RUTH R. WU (1971), *Professor of Nursing*
B.S., 1946, University of California, Berkeley; M.A. 1952, New York University; M.S., 1958, Wayne State University; Ph.D., 1972, University of California, Los Angeles; R.N., 1946, California
- KENNETH WYNSMA (1962), *Associate Professor of Art*
B.A., 1955, M.A., 1956, M.F.A., 1962, Michigan State University
- CHAUCER YANG (1970), *Professor of Finance*
B.A., 1954, University of Formosa; M.B.A., 1957, Ph.D., 1965, New York University
- FLEUR B. YANO (1964), *Professor of Physics*
B.S., 1954, Columbia University; M.S., 1958, University of Southern California; Ph.D., 1966, University of Rochester

- De ANN MARIE YOUNG (1969), *Assistant Professor of Nursing*
 B.S.N., 1960, Ohio State University; M.S.N., 1969, University of Cincinnati; R.N., 1960, Ohio, 1965, Alabama, 1969, California
- FRANK W. YOUNG (1969), *Assistant Professor of German*
 B.S., 1959, Utah State University; Ph.D., 1972, University of Washington
- EUI-YOUNG YU (1968), *Associate Professor of Sociology*
 B.A., 1961, Seoul National University; M.A., 1966, Ph.D., 1969, University of Pennsylvania
- FRED W. ZAHRT, JR. (1959), *Professor of Industrial Studies*
 B.A., 1950, Iowa State Teachers College; M.A., 1957, Los Angeles State College
- PAUL M. ZALL (1957), *Professor of English*
 B.A., 1948, Swarthmore College; M.A., 1950, Ph.D., 1951, Harvard University
- KENNETH ZIMMER (1961), *Professor of Business Education*
 B.S., 1943, New York University; M.A., 1946, Ed.D., 1952, Teachers College, Columbia University
- JOHN ZIMMERMAN (1962), *Assistant Professor of History*
 B.A., 1950, M.A., 1952, Wayne State University
- WAYNE S. ZIMMERMAN (1961), *Test Officer and Professor, Counseling Center*
 A.B., 1940, University of California, Santa Barbara; Ph.D., 1949, University of Southern California
- WANNA M. ZINSMASER (1962), *Professor of Education*
 B.A., 1948, Occidental College; M.A., 1949, Ed.D., 1962, Columbia University
- JAY ZISKIN (1961), *Professor, Counseling Center*
 B.A., 1942, LL.B., 1946, Ph.D., 1962, University of Southern California; admitted to the Bar, 1946, California; Licensed Psychologist, 1962, California
- MARIE-ANTOINETTE ZRIMC (1964), *Associate Professor of French*
 Licence-es-Lettres, 1952, Université de Strasbourg; M.A., 1954, Southern Illinois University; Ph.D., 1969, Harvard University

Appendix A

ELIGIBILITY INDEX

The following table is used in determining the eligibility of graduates of California high schools or California legal residents for admission as a freshman at a California State University or College. For an explanation of the eligibility index and how it is computed, see page 22. All students whose g.p.a. is above 3.20 are eligible for admission; those whose g.p.a. is below 2.0 are not eligible.

Grade Point Average	ACT Composite Score	SAT Total Score	Grade Point Average	ACT Composite Score	SAT Total Score	Grade Point Average	ACT Composite Score	SAT Total Score	Grade Point Average	ACT Composite Score	SAT Total Score
3.20	11	512	2.89	17	760	2.59	23	1000	2.29	29	1240
3.19	11	520	2.88	17	768	2.58	23	1008	2.28	29	1248
3.18	11	528	2.87	17	776	2.57	23	1016	2.27	29	1256
3.17	11	536	2.86	17	784	2.56	23	1024	2.26	29	1264
3.16	11	544	2.85	18	792	2.55	24	1032	2.25	30	1272
3.15	12	552	2.84	18	800	2.54	24	1040	2.24	30	1280
3.14	12	560	2.83	18	808	2.53	24	1048	2.23	30	1288
3.13	12	568	2.82	18	816	2.52	24	1056	2.22	30	1296
3.12	12	576	2.81	18	824	2.51	24	1064	2.21	30	1304
3.11	12	584	2.80	19	832	2.50	25	1072	2.20	31	1312
3.10	13	592	2.79	19	840	2.49	25	1080	2.19	31	1320
3.09	13	600	2.78	19	848	2.48	25	1088	2.18	31	1328
3.08	13	608	2.77	19	856	2.47	25	1096	2.17	31	1336
3.07	13	616	2.76	19	864	2.46	25	1104	2.16	31	1344
3.06	13	624	2.75	20	872	2.45	26	1112	2.15	32	1352
3.05	14	632	2.74	20	880	2.44	26	1120	2.14	32	1360
3.04	14	640	2.73	20	888	2.43	26	1128	2.13	32	1368
3.03	14	648	2.72	20	896	2.42	26	1136	2.12	32	1376
3.02	14	656	2.71	20	904	2.41	26	1144	2.11	32	1384
3.01	14	664	2.70	21	912	2.40	27	1152	2.10	33	1392
3.00	15	672	2.69	21	920	2.39	27	1160	2.09	33	1400
2.99	15	680	2.68	21	928	2.38	27	1168	2.08	33	1408
2.98	15	688	2.67	21	936	2.37	27	1176	2.07	33	1416
2.97	15	696	2.66	21	944	2.36	27	1184	2.06	33	1424
2.96	15	704	2.65	22	952	2.35	28	1192	2.05	34	1432
2.95	16	712	2.64	22	960	2.34	28	1200	2.04	34	1440
2.94	16	720	2.63	22	968	2.33	28	1208	2.03	34	1448
2.93	16	728	2.62	22	976	2.32	28	1216	2.02	34	1456
2.92	16	736	2.61	22	984	2.31	28	1224	2.01	34	1464
2.91	16	744	2.60	23	992	2.30	29	1232	2.00	35	1472

DETERMINATION OF RESIDENCE FOR NONRESIDENT TUITION PURPOSES

New and returning students of The California State University and Colleges are classified for the purpose of determining the residence of each student for nonresident tuition purposes. The Residence Questionnaire and, if necessary, other evidence furnished by the student is used in making these determinations. A student may not register and enroll in classes until his Residence Questionnaire has been received by the Admissions Office.

The following statement of the rules regarding residency determination for nonresident tuition purposes is not a complete discussion of the law, but a summary of the principal rules and their exceptions. The law governing residence determination for tuition purposes by The California State University and Colleges is found in *Education Code* Sections 22800–22865, 23753.1, 23754–23754.4, 23758.2 and 23752, and in Title 5 of the *California Administrative Code*, Article 4 (commencing with Section 41901) of Subchapter 5 of Chapter 1, Part V. A copy of the statutes and regulations is available for inspection at the campus Admissions Office.

Legal residence may be established by an adult who is physically present in the state while, at the same time, intending to make California his permanent home. Steps must be taken at least one year prior to residence determination date to evidence the intent to make California the permanent home with concurrent relinquishment of the prior legal residence. Some of the relevant indicia of an intention to establish and maintain California residence are registering to vote and voting in elections in California; satisfying resident California state income tax obligations on total income; ownership of residential property or continuous occupancy or letting of an apartment on a lease basis where one's permanent belongings are kept; maintaining active resident memberships in California professional or social organizations; maintaining California vehicle plates and operator's license; maintaining active savings and checking accounts in California banks; maintaining permanent military address and home of record in California if one is in the military service, etc.

The student who is within the state for educational purposes only does not gain the status of resident regardless of the length of his stay in California.

In general, the unmarried minor (a person under 18 years of age) derives legal residence from his parents, or, in the case of permanent separation of the parents, from the parent with whom the minor maintains his place of abode. The residence of a minor cannot be changed by act of the minor or that of the minor's guardian, so long as the minor's parents are living.

A man or a woman may establish his or her residence; marriage is not a governing factor.

The general rule is that a student must have been a California resident for at least one year immediately preceding the residence determination date in order to qualify as a "resident student" for tuition purposes. A residence determination date is set for each academic term and is the date from which residence is determined for that term. The residence determination dates, commencing Fall, 1975 and thereafter, are: Fall Quarter, September 20; Winter Quarter, January 5; Spring Quarter, April 1; and Summer Quarter, July 1. If you have any questions with respect to applicable date, the campus Admissions Office can give you the residence determination date for the term for which you are registering.

There are several exceptions for nonresident tuition. Some of the exceptions provide for:

- (1) Persons below the age of 19 whose parents were residents of California but who left the state while the student who remained was still a minor. When the minor reaches age 18, the exception continues for one year to enable the student to qualify as a resident student.
- (2) Persons below the age of 19 who have been present in California for more than a year before the residence determination date, and entirely self-supporting for that period of time.
- (3) Persons below the age of 19 who have lived with and been under the continuous direct care and control of an adult, not a parent, for the two years immediately preceding the residence determination date. Such adult must have been a California resident for the most recent year.
- (4) Dependent children and spouses of persons in active military service stationed in California on the residence determination date. This exception applies only for the minimum time required for the student to obtain California residence and maintain that residence for a year. The exception, once attained, is not affected by transfer of the military person directly to a post outside the 50 states and District of Columbia.
- (5) Military personnel in active service stationed in California on the residence determination date for purposes other than education at state-supported institutions of higher education. This

exception applies only for the minimum time required for the student to obtain California residence and maintain that residence for a year.

- (6) A student who is an adult alien is entitled to residence classification if the student has been lawfully admitted to the United States for permanent residence in accordance with all applicable provisions of the laws of the United States; provided, however, that the student has had residence in California for more than one year after such admission prior to the residence determination date. A student who is a minor alien shall be entitled to residence classification if both the student and the parent from whom residence is derived have been lawfully admitted to the United States for permanent residence in accordance with all applicable laws of the United States, provided that the parent has had residence in California for more than one year after acquiring such permanent residence prior to the residence determination date of the term for which the student proposes to attend the University.
- (7) Certain credentialed, full-time employees of school districts.
- (8) Full-time State University and Colleges employees and their children and spouses. This exception applies only for the minimum time required for the student to obtain California residence and maintain that residence for a year.
- (9) Certain exchange students.
- (10) Children of deceased public law enforcement or fire suppression employees, who were California residents, and who were killed in the course of law enforcement or fire suppression duties.
- (11) A person in continuous full-time attendance at an institution who had resident classification on May 1, 1973, shall not lose such classification as a result of adoption of the uniform student residency law on which this statement is based, until the attainment of the degree for which currently enrolled.

Any student, following a final decision on campus on his residence classification, may make written appeal to: The California State University and Colleges, Office of General Counsel, 400 Golden Shore Drive, Long Beach, California, 90802 within 120 calendar days of notification of the final decision on campus of his classification. The Office of General Counsel may make a decision on the issue, or it may send the matter back to the institution with instructions for a further review on campus. Students classified incorrectly as residents or incorrectly granted an exception from nonresident tuition are subject to reclassification as nonresidents and payment of nonresident tuition in arrears. If incorrect classification results from false or concealed facts, the student is subject to discipline pursuant to Section 41301 of Title 5 of the *California Administrative Code*. Resident students who become nonresidents, and nonresident students qualifying for exceptions whose basis for so qualifying changes, must immediately notify the Admissions Office. Applications for a change in classification with respect to a previous term are not accepted.

The student is cautioned that this summation of rules regarding residency determination is by no means a complete explanation of their meaning. The student should also note that changes may have been made in the rate of nonresident tuition, in the statutes, and in the regulations between the time this catalog is published and the relevant residence determination date.

STUDENT SERVICES FEE

The Student Services Fee was established in 1974 by the trustees of The California State University and Colleges *in lieu* of the Material and Services Fee; however, the fee level was maintained at \$144 (for 12 or more units for the academic year). It is intended that this new fee will provide financing for the following student services programs not covered by state funding:

- (1) Social and Cultural Development Activities: provide for the coordination of various student activities, student organizations, student government and cultural programs.
- (2) Counseling: includes the cost of counselor's salaries and clerical support plus operating expenses and equipment.
- (3) Testing: covers the cost of test officers, psychometrists, clerical support, operating expenses and equipment.
- (4) Placement: provides career information to students and faculty for academic program planning and employment information to graduates and students.
- (5) Financial Aids Administration: Includes the cost of the counseling and business services provided in connection with the financial aids programs.
- (6) Health Services: provides health services to students and covers the cost of salaries of medical officers and nurses plus related clerical and technical personnel as well as operating expenses and equipment.
- (7) Housing: includes the cost of personnel providing housing information and monitoring housing services provided to students.
- (8) Student Services Administration: covers 50% of the cost of the Dean of Students office, which has responsibility for the overall administration of student services.

The previous Materials and Services Fee covered not only the above expenditures but also the cost of instructional and audio visual supplies and contractual services. A task force recommended that responsibility for financing these expenditures be transferred to the State and that the basis for this fee be fully and clearly communicated to students and campus staff. The 1976-77 Student Services Fee is subject to change by future Board of Trustees action made necessary by budget actions of the executive and legislative branches of government.

Appendix D

AVERAGE ANNUAL COSTS AND SOURCES OF FUNDS PER FULL-TIME EQUIVALENT* STUDENT IN THE CALIFORNIA STATE UNIVERSITY AND COLLEGES

The 19 campuses of The California State University and Colleges are financed primarily through funding provided by the taxpayers of California. For the 1975-76 year, the total cost of operation is \$657.2 million, which provides continuing support for 230,005 full-time equivalent (FTE*) students. This results in an average cost per FTE student of \$2,608 per year. Of this amount, the average student pays \$262. Included in this average student payment is the amount paid by nonresident students. The remaining \$2,354 in costs are funded by state and federal taxes.

Averages do not fit all students alike or even any specific student. To arrive at an average figure that is meaningful, the costs outlined above exclude "user fees" for living expenses, housing, and parking, as well as costs for extension and summer session work. Computations are based on full-time equivalent students, not individuals, and costs are prorated by system totals, not by campus. The average costs for a full-time equivalent student in the system are depicted in the following chart:

1975-76 PROJECTION OF TOTAL COSTS OF CAMPUS OPERATION (Including Building Amortization)

Enrollment: 230,005 FTE

Amount	Amount	Average Cost Per Student (FTE)*	Percentage
State Appropriation (Support)	\$538,523,643	\$2,371	82.0
State Funding (Capital Outlay)**	29,138,200	127	4.4
Student Charges	60,374,319	262***	9.2
Federal (Financial Aids)	29,192,461	127	4.4
Total	\$657,228,623	\$2,587	100.0

*For budgetary purposes, full-time equivalent (FTE) translates total head count into total academic student load. The term assumes that a full-time student in The California State University and Colleges is enrolled for 15 units of academic credit. Some students enroll for more than 15 units; some students enroll for fewer than 15 units.

**The system's more than 14,000 acres of land and the wide range of facilities and equipment on the 19 campuses are currently valued at approximately \$1.16 billion. Amortized over a 40-year period, they are valued at \$127 per FTE student.

***The average costs paid by a student include the student services fee health facilities fee, college union fee, student body fee, and the nonresident tuition. This amount is derived by taking the total of all student fees and dividing by the total full-time equivalent student enrollment. Individual students may pay more or less than \$262 depending on whether they are part-time, full-time, resident or nonresident students.

Appendix E

EXPULSION, SUSPENSION AND PROBATION OF STUDENTS

Violation of Sections 41301 and 41302 in Article 1, Subchapter 3, Chapter 5, Title 5 of the *California Administrative Code* can result in disciplinary action on campus. 41301. EXPULSION, SUSPENSION AND PROBATION OF STUDENTS. Following procedures consonant with due process established for the campus of which he is a student, any student of a campus may be expelled, suspended, placed on probation or given a lesser sanction for one or more of the following causes which must be campus related:

- (a) Cheating or plagiarism in connection with an academic program at a campus.
- (b) Forgery, alteration or misuse of campus documents, records, or identification or knowingly furnishing false information to a campus.
- (c) Misrepresentation of oneself or of an organization to be an agent of a campus.
- (d) Obstruction or disruption, on or off campus property, of the campus educational process, administrative process, or other campus function.
- (e) Physical abuse on or off campus property of the person or property of any member of the campus community or of members of his family or the threat of such physical abuse.
- (f) Theft of, or non-accidental damage to, campus property, or property in the possession of, or owned by, a member of the campus community.
- (g) Unauthorized entry into, unauthorized use of, or misuse of campus property.
- (h) On campus property, the sale or knowing possession of dangerous drugs, restricted dangerous drugs, or narcotics as those terms are used in California statutes, except when lawfully prescribed pursuant to medical or dental care, or when lawfully permitted for the purpose of research, instruction or analysis.
- (i) Knowing possession or use of explosives, dangerous chemicals or deadly weapons on campus property or at a college campus function without prior authorization of the campus president.
- (j) Engaging in lewd, indecent, or obscene behavior on campus property or at a campus function.
- (k) Abusive behavior directed toward a member of the campus community.
- (l) Violation of any order of a campus president, notice of which had been given prior to such violation and during the academic term in which the violation occurs, either by publication in the campus newspaper, or by posting on an official bulletin board designated for this purpose and which order is not inconsistent with any of the other provisions of this Section.
- (m) Soliciting or assisting another to do any act which would subject a student to expulsion, suspension or probation pursuant to this Section.
- (n) For purposes of this Article, the following terms are defined:
 - (1) The term "member of the campus community" is defined as meaning California State University and Colleges Trustees, academic, non-academic and administrative personnel, students, and other persons while such other persons are on campus property or at a campus function.
 - (2) The term "campus property" includes:
 - (a) real or personal property in the possession of, or under the control of, the Board of Trustees of The California State University and Colleges,
 - and
 - (b) all campus feeding, retail, or residence facilities whether operated by a campus or by a campus auxiliary organization.
 - (3) The term "deadly weapons" includes any instrument or weapon of the kind commonly known as a blackjack, sling shot, billy, sandclub, sandbag, metal knuckles, any dirk, dagger, switchblade knife, pistol, revolver, or any other firearm, any knife having a blade longer than five inches, any razor with an unguarded blade, and any metal pipe or bar used or intended to be used as a club.
 - (4) The term "behavior" includes conduct and expression.
- (o) This section is not adopted pursuant to *Education Code* Section 23604.1.
- (p) The provisions of this section as hereinabove set forth shall only apply to acts and omissions occurring subsequent to its effective date. Notwithstanding any amendment or repeal pursuant

to the resolution by which any provision of this article is amended, all acts and omissions occurring prior to that effective date shall be subject to the provisions of this Article as in effect immediately prior to such effective date.

41302. EXPULSION, SUSPENSION OR PROBATION OF STUDENTS: FEES AND NOTIFICATION. The President of the campus may place on probation, suspend, or expel a student for one or more of the causes enumerated in Section 41301. No fees or tuition paid by or for such student for the semester, quarter, or summer session in which he is suspended or expelled shall be refunded. If the student is readmitted before the close of the semester, quarter, or summer session in which he is suspended, no additional tuition or fees shall be required of the student on account of his suspension. In the event that a student who has not reached his twenty-first birthday is suspended or expelled, the President shall immediately notify his parents or guardian of the action by registered mail to the last known address, return receipt requested.

During periods of campus emergency, as determined by the President of the individual campus, the President may, after consultation with the Chancellor, place into immediate effect any emergency regulations, procedures, and other measures deemed necessary or appropriate to meet the emergency, safeguard persons and property, and maintain educational activities.

The President may immediately impose an interim suspension in all cases in which there is reasonable cause to believe that during a campus disturbance a student has interfered with the peaceful conduct of the campus by an act which is a cause for disciplinary action pursuant to Section 41301 and that, unless placed on interim suspension, such student would commit further acts of the same or a similar character. A student so placed on interim suspension shall be given prompt notice of charges and the opportunity for a hearing within not to exceed one week of the imposition of interim suspension. During the period of interim suspension, the student shall not, without prior written permission of the President or his designated representative, enter any campus of The California State University and Colleges other than to attend the hearing. Violation of any condition of interim suspension shall be grounds for expulsion.

41303. CONDUCT BY APPLICANTS FOR ADMISSION. Notwithstanding any provision in this chapter 1 to the contrary, admission or readmission may be qualified or denied to any person who, while not enrolled as a student, commits acts which, were he enrolled as a student, would be the basis for disciplinary proceedings pursuant to Sections 41301 or 41302. Admission or readmission may be qualified or denied to any person who, while a student, commits acts which are subject to disciplinary action pursuant to Section 41301 or Section 41302. Qualified admission or denial of admission in such cases shall be determined under procedures adopted pursuant to Section 41304.

41304. STUDENT DISCIPLINARY PROCEDURES FOR THE CALIFORNIA STATE UNIVERSITY AND COLLEGES. The Chancellor shall prescribe, and may from time to time revise, a code of student disciplinary procedures for The California State University and Colleges. Subject to other applicable law, this code shall provide for determinations of fact and sanctions to be applied for conduct which is a ground of discipline under Sections 41301 or 41302, and for qualified admission or denial of admission under Section 41303; the authority of the campus president in such matters; conduct related determinations on financial aid eligibility and termination; alternative kinds of proceedings, including proceedings conducted by a Hearing Officer; time limitations, notice; conduct of hearings, including provisions governing evidence, a record, and review; and such other related matters as may be appropriate. The Chancellor shall report to the Board his actions taken under this section.

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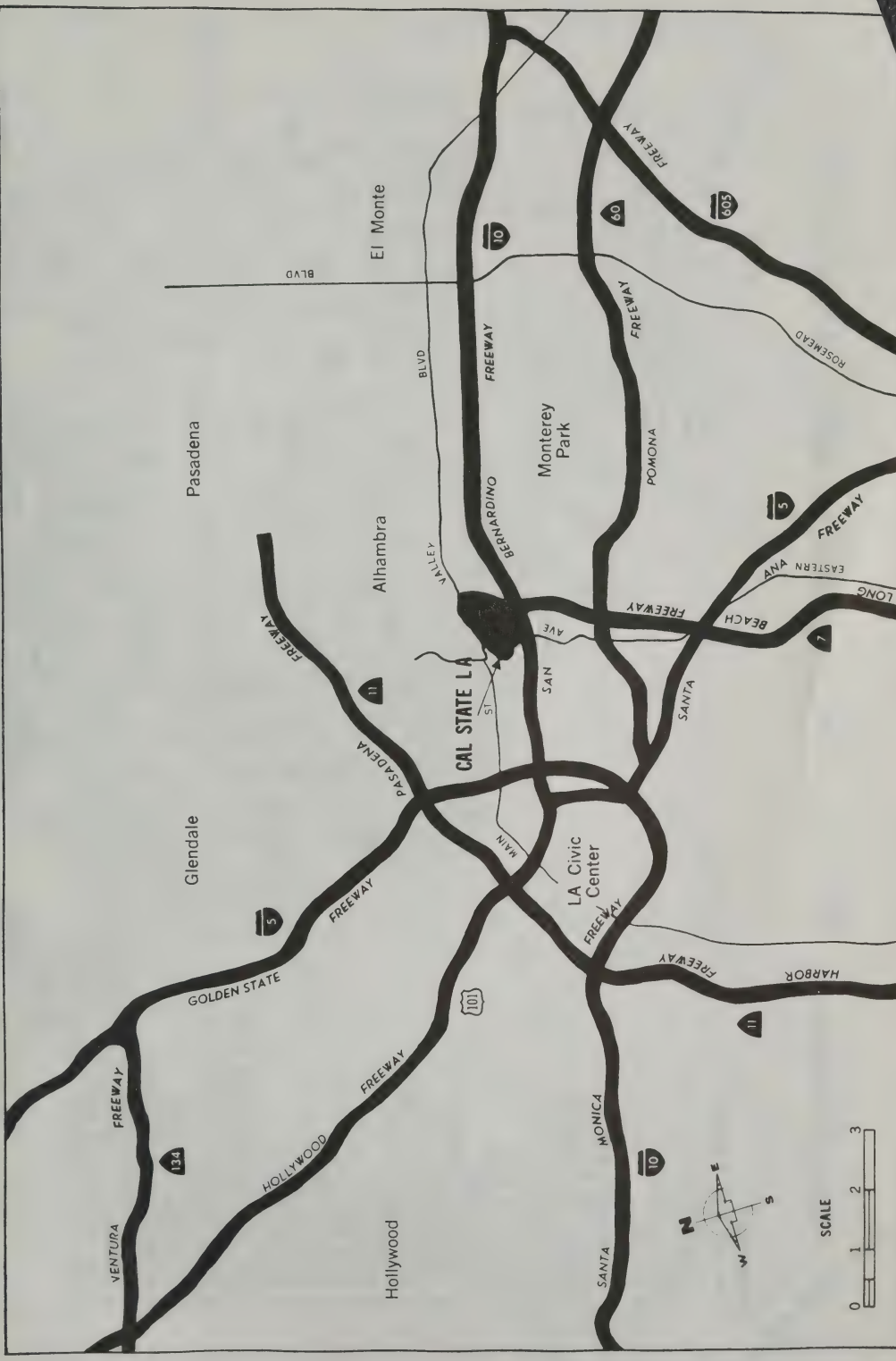
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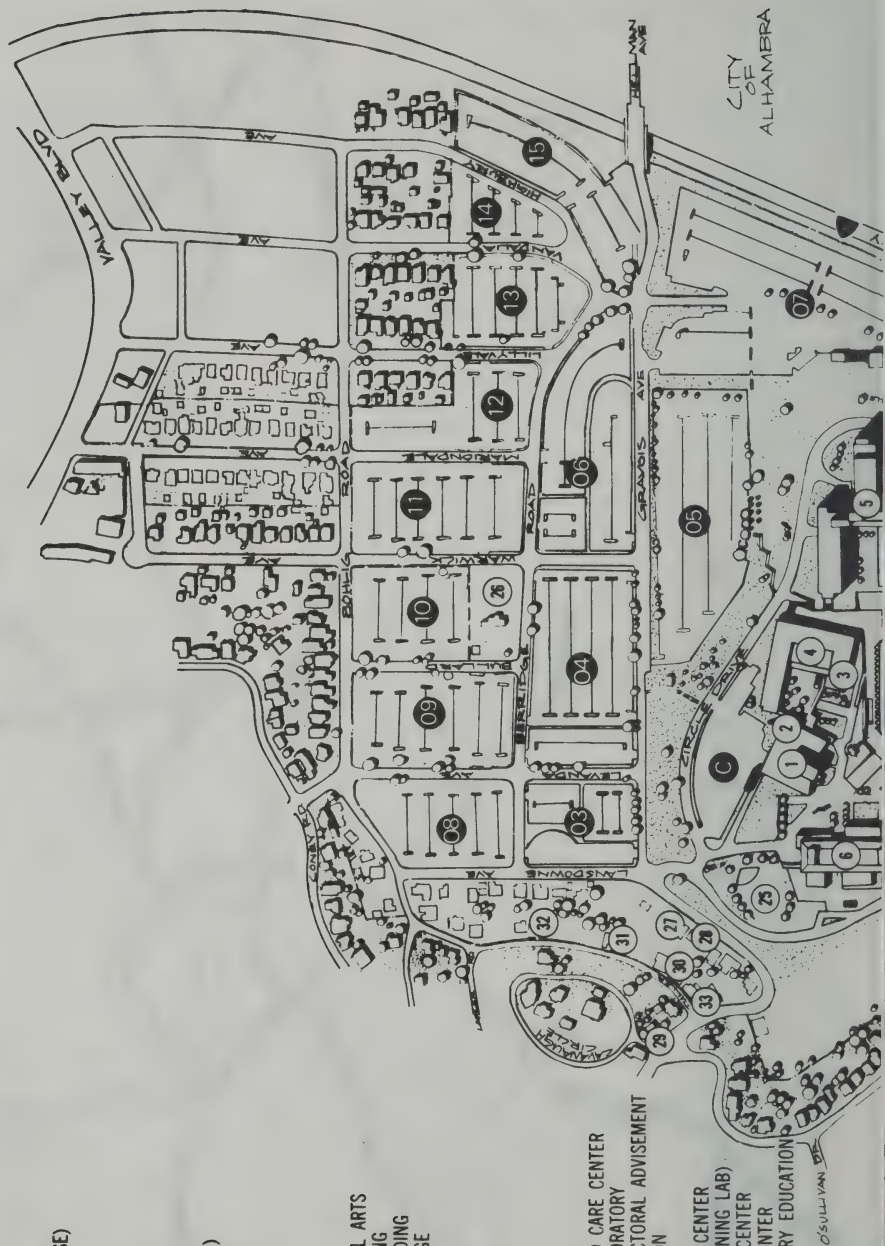
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- 1 THEATER (STATE PLAYHOUSE)
- 2 MUSIC HALL
- 3 ARENA THEATER
- 4 MUSIC BUILDING
- 5 KING HALL
- 6 UNIVERSITY UNION
- 7 CAFETERIA, GOLD ROOM
- 8 FACULTY CLUB (Future Site)
- 9 KENNEDY LIBRARY NORTH
- 10 KENNEDY LIBRARY SOUTH
- 11 ADMINISTRATION
- 12 FINE ARTS
- 13 PHYSICAL EDUCATION
- 14 HEALTH CENTER
- 15 ENGINEERING — INDUSTRIAL ARTS
- 16 PHYSICAL SCIENCE BUILDING
- 17 BIOLOGICAL SCIENCE BUILDING
- 18 TRIDENT SHOP AND LOUNGE
- 19 ALUMNI PLAZA
- 20 SOUTH TOWER
- 21 SOUTH HALL
- 22 DIAGNOSTIC SCHOOL
- 23 STADIUM
- 24 RTD BUSWAY
- 25 AMPHITHEATER
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- 27 CHILD DEVELOPMENT LABORATORY
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- 32 INTERNATIONAL STUDENT CENTER
- 33 VETERANS COUNSELING CENTER
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